

New species in the *Zelotes tenuis*-group and new or little known species in other *Zelotes* groups (Gnaphosidae, Araneae)

Antoine SENGLET

Route de Begnins, 19, CH-1267 Vich, Switzerland. E-mail: a.senglet@bluewin.ch

New species in the *Zelotes tenuis*-group and new or little known species in other *Zelotes* groups (Gnaphosidae, Araneae). - Notes are given on mating mechanisms of *Z. tenuis* and *Z. semirufus* in the *Z. tenuis*-group. Eight species are recognized in the *Z. tenuis*-group. The following synonyms and new combinations are proposed: *Trachyzelotes manytchensis* Ponomarev & Tsvetkov = *Zelotes manytchensis*, *Z. ruscinensis* Simon = *Z. semirufus* (L. Koch), *Z. fuscotestaceus* (Simon) = *Z. tenuis* (L. Koch), *Z. denisi* Marinaro = *Z. criniger* Denis and *Z. sumchi* Levy = *Z. metellus* Roewer. *Z. babunaensis* (Drenski) is revalidated. First description are given of the male of *Z. babunaensis*, the male of *Z. metellus*, the female of *Z. flagellans* (L. Koch), and of the following eight species: *Z. alpujarraensis* sp. n., *Z. baeticus* sp. n., *Z. chaniaensis* sp. n., *Z. cordubensis* sp. n., *Z. egreioides* sp. n., *Z. hispaliensis* sp. n., *Z. laconicus* sp. n. and *Z. pediculatoides* sp. n.

Keywords: Arachnida - taxonomy - mating mechanism.

INTRODUCTION

The study of the ♂ pedipalp in *Zelotes* has led to the grouping of species. The *Zelotes subterraneus* group (Senglet, 2004: 106) and the *Z. petrensis* group (Senglet, 2004: 111) have been discussed earlier. Five additional groups are treated here, the *Z. tenuis*, *Z. thorelli*, *Z. atrocaeruleus*, *Z. baeticus* and *Z. metellus*-groups.

MATERIAL AND METHODS

Except for the ♀ of *Z. prishutovae* and the types specimens of *Zelotes semirufus*, *Z. fulvaster* and *Z. fulvopilosus*, all spider material was collected by myself. Measurements are in millimetres. Vulvae were examined on an excavated microscopic slide, in lactic acid. Holotypes and paratypes of the species described in here are deposited in the Natural History Museum of Geneva (MHNG); the other material, if not indicated otherwise, remains in my collection. For details on rearing and cryofixing of mated spiders, see Senglet (2004: 87).

The typical leg spination according to Platnick & Shadab (1983) is: Femora; I, II d110, p001; III, IV d110, p011, r011; patella III r010; tibiae: III p111, v222, r011; IV p111, v222, r111; metatarsi: I, II v200; III p122, v221, r112; IV p122, v220, r122. Only differences to this pattern are given in the text. AME, ALE, PME, PLE and MOQ refer

to anterior median, anterior lateral, posterior median, posterior lateral eyes and to the median ocular quadrangle (eyes included).

Terminology of genital structures follows Senglet (2004: 88-90). Additional comments on some structures are:

Embolar radix: This structure (Figs 8-10; Senglet, 2004: 88, fig. 1a, 1d) seems to be present in many *Zelotinae*. In *Trachyzelotes* and in many *Zelotes* groups it is a solid sclerite at the posterior base of the embolus; in some cases it is articulated or flexible.

Embolar base: A term for the ventral base of the embolus. Present in different *Zelotinae* genera; originating from the prolateral base of the tegulum, it is usually connected to the embolus with a flexible joint. There is no connection to the embolus in the *Zelotes thorelli*-group.

Posterior sclerite of terminal apophysis: Where present in *Zelotinae*, the terminal apophysis is a ventral sclerotized extension of the embolar base. The presence of a posterior sclerite of the terminal apophysis (absent in *Drassyllus* and *Trachyzelotes*) is a synapomorphy of *Zelotes* s. str. This sclerite may be reaching the root of the radix (*Z. subterraneus*, *Z. longipes* and *Z. thorelli*-groups), the middle sector of the radix (*Z. tenuis*-group), or even the embolus (*Z. baeticus*-group).

Intercalary sclerite: Rightly considered as a synapomorphy of the genus by Platnick & Shadab (1983: 100, fig. 2), it is a widening of the proximal part of the embolar base. Present only in conjunction with the posterior sclerite of the terminal apophysis, highly variable and often reduced, it seems that its basic function is to offer a flexible joint to the terminal apophysis fastened to the posterior segment of the tegulum (Senglet, 2004: fig. 13).

TAXONOMY AND FAUNISTIC DATA

Genus *Zelotes* Gistel, 1848

TYPE SPECIES: *Zelotes subterraneus* (C. L. Koch, 1833)

KEY TO SPECIES GROUPS

- 1 Embolar radix with sclerotized connection to embolus; no dorsal apophysis on embolar base *Zelotes* s. str., 2
- Embolar radix with a membranous connection to embolus; a dorsal apophysis present on embolar base *Z. criniger-metellus*-group
- 2 Embolar base a simple transverse sclerite with a retrolateral projection and a notched link to embolus; posterior sclerite of terminal apophysis connected to posterior tegular base *Z. subterraneus*-group
- Different 3
- 3 Embolus not coiled 4
- Long coiled embolus (turning left on left palp) without direct connection to embolar base. Embolar base fused to terminal apophysis up to its apical projection. Strong embolar radix and posterior sclerite of terminal apophysis at a relatively acute angle (Figs 83, 92) *Z. thorelli*-group
- 4 Elevated arched embolar base with a distad-directed embolus. Posterior sclerite of terminal apophysis connected to median part of embolar

radix. Epigynum with single lateral folds; median sector membranous . .

..... ***Z. tenuis*-group**

- Embolar base partly fused with terminal apophysis. Terminal apophysis with ventral and dorsal lobe; its posterior sclerite connected to posterior tegular base (Figs 139-141, 146-147). Epigynum with single lateral folds

..... ***Z. atrocaerulaeus*-group**

- Embolar base elevated and arched; posterior sclerite of terminal apophysis connected directly to embolus (Fig. 133); embolus linked to embolar base by whitish cuticle along its prolateral margin (Figs 120, 127, 131 & 133); the large embolus carrying a terminal segment in the shape of a wide tube; its variable ventral protrusion corresponding to prolateral projection of median apophysis. Lateral folds of epigynum modified into large lateral pockets; median part membranous (Figs 123, 134) ***Z. baeticus*-group**

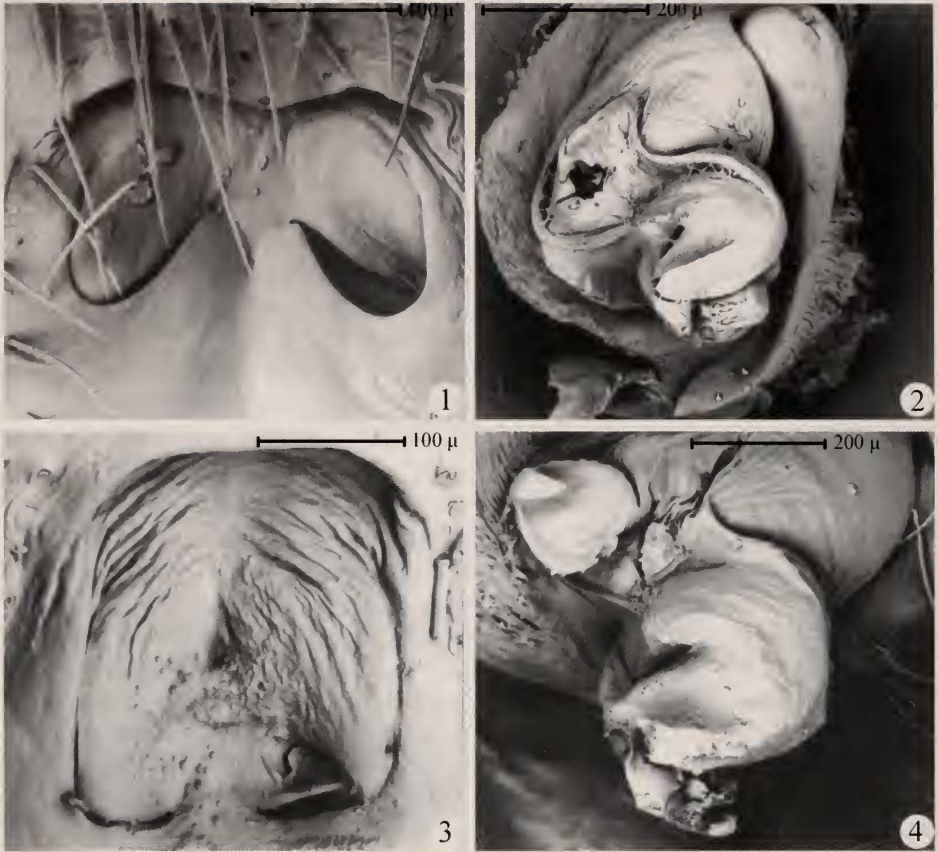
***Zelotes tenuis*-group**

DEFINITION: The male pedipalp has an embolar radix, an intercalary sclerite and an elevated arched embolar base with a distad-directed embolus. The terminal apophysis has a posterior sclerite connected to the median part of the radix in *Z. subterraneus* and *Z. longipes*-groups (Senglet, 2004: figs 1a, 1d, 12-14), the connection is situated below the base of the embolar radix. The arched embolar base has a variable tooth, which is replaced in *Z. manitchensis* and *Z. alpujarraensis* sp. n. by a retrolateral projection. The female has plain lateral epigynal folds enclosing a membranous cuticle. Except for *Z. alpujarraensis*, the type of ocular group shown in Figs 54-55 is shared by all species of the *Z. tenuis*-group; the PME are larger or equal to the PLE and separated by 15 to 35% of their diameter. In *Z. alpujarraensis* the posterior eyes are of equal size, separated by 70% of their diameter.

MATING MECHANISM: In *Zelotes tenuis* (Fig. 1) and *Z. fusciorufus* (Senglet, 2004: 32-34) the apical part of the embolar base is inserted into the posterior segment of the epigynal pocket, putting the embolus in contact with the insemination pore. In *Zelotes semirufus* (Figs 2-4), however, the proximal apophysis of the embolar base (Figs 2, 11-12) is inserted into the swollen membranous median cuticle of the epigynum (Fig. 3); the broken prolateral hook of the embolar base of Fig. 4 remains inside the cuticle in Fig. 3; the transverse cuticle fold filling the gap between embolus and prolateral embolar base apophysis is visible. The same type of folded median membranous part is found in *Z. chaniaensis* sp. n. and *Z. fulvaster*. Figures 5-11 show details of the male bulbus in copula.

KEY TO THE SPECIES OF THE *ZELOTES TENUIS*-GROUP

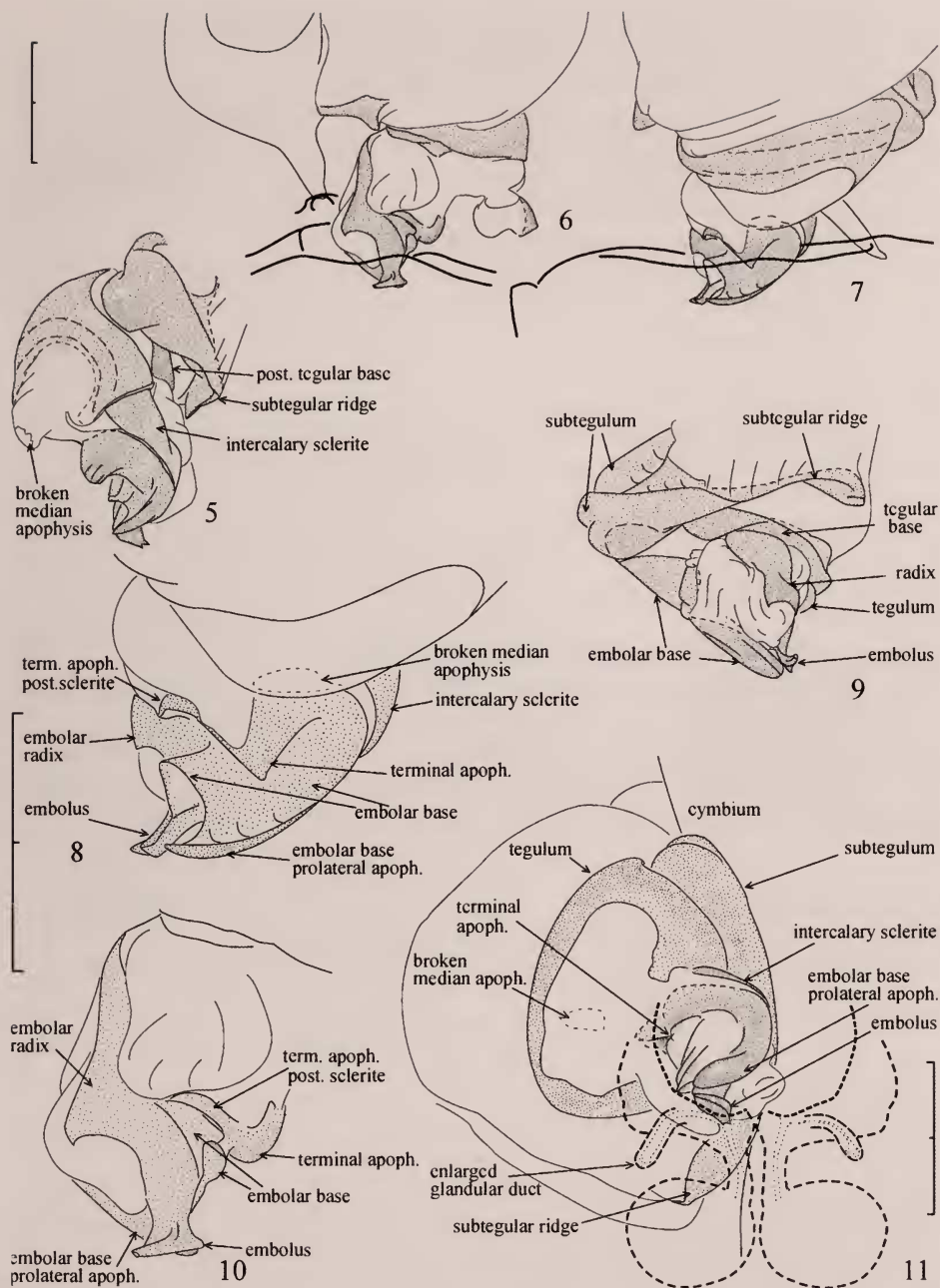
♂		1
♀		8
1	Apical margin of embolar base convex	3
-	Apical margin of embolar base concave between distal tooth and embolus (Figs 12, 33)	2



FIGS 1-4

(1) *Zelotes tenuis*, epigynum in copula, male palp extracted. (2-4) *Zelotes semirufus*, left male palp extracted in copula. (2) Left male palp, apical view (compare with Fig. 11). (3) Epigynum. (4) Broken left male palp (inserted in epigynum shown in Fig. 3).

- 2 Large apophysis on embolar base, situated prolaterally (Fig. 13) . *Z. semirufus*
- Small hook-shaped apophysis on embolar base, situated close to embolus (Figs 33-34) *Z. fulvaster*
- 3 A retrolateral projection on embolar base (Figs 61-62, 66-69) 7
- No retrolateral projection 4
- 4 Retrolateral tibial apophysis ribbon-like, bifid (Fig. 20) *Z. fusciorufus*
- Retrolateral tibial apophysis tapering 5
- 5 A small retrolaterally directed apical hook on embolar base (Fig. 53) ..
..... *Z. chaniaensis* sp. n.
- A small triangular apical tooth on embolar base 6
- 6 Retrolateral tibial apophysis longer than dorsal length of tibia; width of pedipalpal tibia more than 3/4 of its dorsal length (Fig. 28); embolus short (Figs 22-24) *Z. babunaensis*



FIGS 5-11

Zelotes semirufus, left male palp in copula, viewed from the female opisthosoma. (5) Anterior view. (6) Posterior view. (7) Left view. (8) Id., detail. (9) Right view. (10) Posterior view, detail. (11) Palp on female with vulva in dorsal view. Bold lines indicate female parts. Scale lines 0.2 mm.

- Retrolateral tibial apophysis shorter than dorsal length of tibia; width of pedipalpal tibia 2/3 of its length or less (Figs 40-43) *Z. tenuis*
- 7 Retrolateral embolar base projection slender, long, curved (Figs 66-69)
..... *Z. alpujarraensis* sp. n.
- Retrolateral embolar base projection short, membranous (Figs 60-62) ..
..... *Z. manitchensis*
- 8 Epigynal plate much wider than long (Figs 21, 63, 73 & 77) 14
- Epigynal plate longer than wide or slightly wider 9
- 9 Lateral epigynal fold more or less curved, with a posterior rounded bend .. 10
- Lateral epigynal fold almost straight, with an acute posterior bend;
lateral vulval pouch posteriorly widened; median ducts connected on
median side of spermathecae (Figs 37-39, 75). *Z. fulvaster*
- 10 Width of anterior epigynal margin equal to or less than epigynal width 11
- Anterior epigynal margin wider than epigynal width (Figs 29, 57) 12
- 11 Short median ducts leaving the median epigynal cuticle undivided (Figs
16-17) *Z. semirufus*
- Posterior part of median cuticle divided by median ducts and folds (Figs
45-49) *Z. tenuis*
- 12 Short median ducts leaving the median epigynal cuticle undivided (Figs
70-71) *Z. alpujarraensis* sp. n.
- Posterior area of median cuticle divided by median ducts and folds 13
- 13 Short curved median ducts (Figs 57-58) *Z. chaniaensis* sp. n.
- Straight or slightly curved long median ducts with an acute bend, close
to the insemination pore (Figs 30-31) *Z. babunaensis*
- 14 Short median ducts (Fig. 21) *Z. fusciorufus*
- Long median ducts (Figs 63-64) *Z. manytchensis*

Zelotes semirufus (L. Koch, 1882)

Figs 2-17, 74

Prothesima semirufa L. Koch, 1882: 636, pl. 20, fig. 15 (description of ♀).

Zelotes ruscinensis Simon, 1914: 157, 169, 219, figs 295, 346 (description of ♂) **syn. n.** –
Senglet, 2004: 104, figs 47-50.

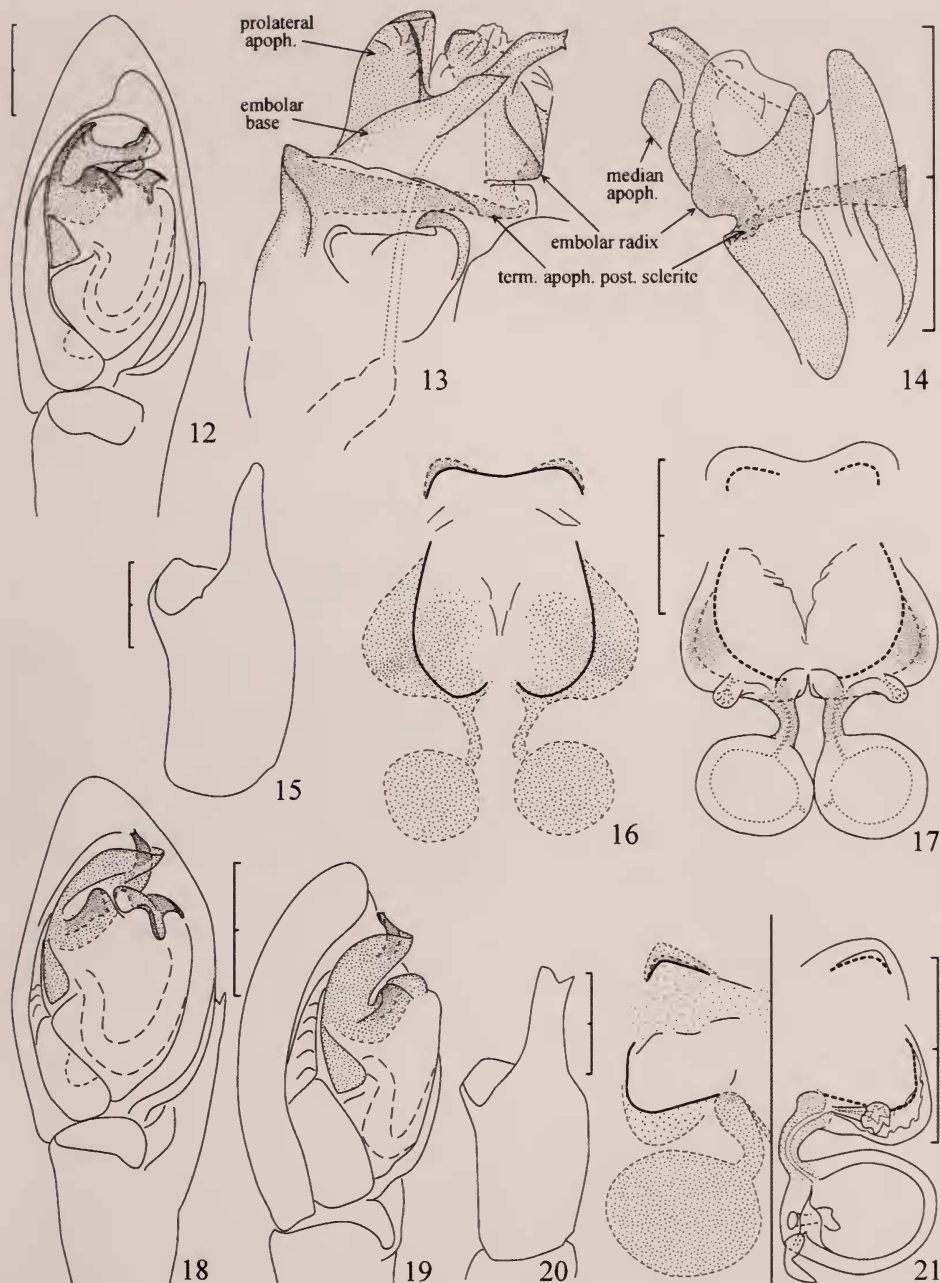
For previous synonymy, see Senglet (2004: 104) and Platnick (2011).

TYPE MATERIAL: BM1915.3.5.6100, Natural History Museum (London); 1 ♀ from Menorca; received on loan through the courtesy of Mrs Janet Beccaloni.

OTHER MATERIAL EXAMINED: SPAIN, Levant / Murcia, Alicante, Elche (in palm grove), 38°17'N 00°42'W; 1 ♂ (last moult 08.07.2002); 15.05.2002. – Estremadura, Caceres, west of Jarandilla (litter in vegetation), 40°08'N 05°40'W; 1 ♀ (last moult 17.08.2009); 16.06.2009. – Andalusia, Cordoba, Almodóvar del Río (Breña dam), 37°50'N 05°04'W; 1 ♀ (last moult 18.08.2009); 01.06.2009. – Huelva, Puerto Gil /Aracena (cork-oak leaf litter), 37°53'N 06°29'W; 1 ♀ (last moult 21.08.2009); 07.06.2009. – Huelva, Alajar /Aracena, 37°53'N 06°40'W; 6 ♂, 5 ♀ (last moults of ♂ 02 to 28.07.2009, of ♀ 12.07 to 23.08.2009); 09.06.2009.

DIAGNOSIS: The male of *Z. semirufus* is easily distinguishable from those of other species of the *tenuis*-group by its large prolateral hook on the embolar base, and the female by its wide lateral pouches with folded cuticle, its narrow anterior epigynal margin and its widely separated median ducts (Figs 12-17, 74).

DESCRIPTION: See Senglet, 2004: 104.



FIGS 12-21

(12-17) *Zelotes semirufus*. (12-15) Left male palp. (12) Ventral view. (13) Distal part, cleared, retrolateral view. (14) Id., dorsal view. (15) Tibia, retrolateral view. (16) Koch's type, epigynum. (17) Id., vulva, dorsal view. (18-21) *Zelotes fusciorufus*. (18-20) Left male palp. (18) Ventral view. (19) Prolateral view. (20) Tibia, retrolateral view. (21) Epigynum (on left) + vulva, dorsal view. Bold lines indicate epigynal folds. Scale lines 0.2 mm.

***Zelotes fusciorufus* (Simon, 1878)**

Figs 18-21, 73

Prothesima fusco-rufa Simon, 1878: 95, pl. 14, fig. 28 (description of ♂ & ♀).*Zelotes fusciorufus*. – Senglet, 2004: 102, figs 1b-c, 32-34, 51-54.

For redescription and previous literature, see Senglet (2004: 102) and Platnick (2010).

DIAGNOSIS: The male of *Z. fusciorufus* is easily distinguishable from males of other species of the *tenuis*-group by the bifid retrolateral tibial apophysis and the more distad-directed embolar base, and the female by its epigynum wider than long (Figs 18-21, 73).

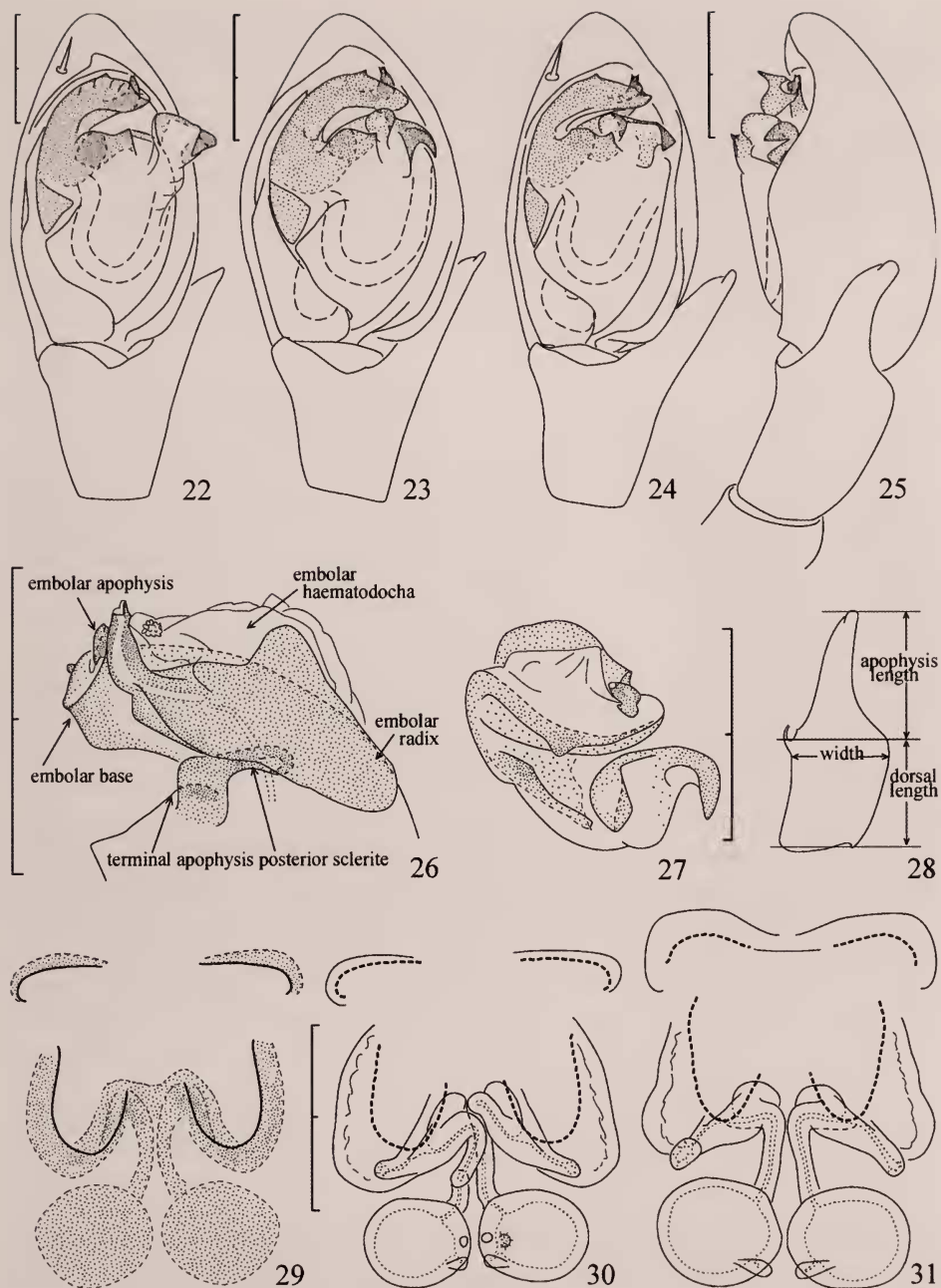
***Zelotes babunaensis* (Drensky, 1929),**

Figs 22-31, 76

here removed from the synonymy of *Z. tenuis**Echemus babunaensis* Drensky, 1929: 5, 59, pl. 1, figs 3-4 (description of ♀).*Zelotes babunaensis*. – Deltšev & Blagoev, 2001: 110 (transfer of ♀ from *Echemus*).*Zelotes tenuis*. – Deltšev, 2003: 137, fig. 8, not figs 9-10 = *Z. tenuis* (synonymy of ♀, misidentification). – Chatzaki *et al.*, 2003: 80, figs 108-110, 113-114 (misidentification), not figs 105-107, 111-112 = *Z. chaniaensis* sp. n.

MATERIAL EXAMINED: GREECE, Macedonia, Thessaloniki, Loutra Apollonias (in litter), 40°39'N 23°24'E; 1 ♀ (last moult 17.09.2004); 09.09.2004. – Epiros, Thesprotia, near Neraïda, 39°31'N 20°24'E; 1 ♂; 21.06.1998. – Thessalia, Larissa, Omólion-Tempé, 39°53'N 22°37'E; 1 ♂ (1 palpus lost), 1 ♀; 17.06.1970. – Sterea Hellas, Attiki, Marathon lake, 38°10'N 23°54'E; 1 ♀ (with vulva in microvial); 11.07.1968. – Phthiotidas, Trägana, 38°37'N 23°07'E; 1 ♂; 13.07.1968. – Phthiotidas, Theologos, 38°39'N 23°12'E; 1 ♂, 2 ♀ (with vulva in microvial, last moults of ♂ 22.5, of ♀ 27.05 and 25.06.1998); 20.05.1998. – Eubea, Loutra Aidipsou, 38°53'N 22°59'E; 1 ♂; 29.05.1983. – Peloponnesus, Laconia, east of Lira (in *Pinus* litter), 36°39'N 22°58'E; 1 ♂, 1 ♀ (vulva in microvial, last moults of ♂ 06.06.2005, of ♀ 30.06.2005); 03.10.2004. – Argolida, east of Ligourion (in *Lentiscus* litter), 37°38'N 23°04'E; 1 ♂ (last moult 05.06.2005); 01.10.2004. – Argolida, Palaia Epidauros, 37°39'N 23°09'E; 1 ♀ (vulva lost); 05.06.1981. – Cyclades, Naxos, north-west of Sangri, 37°03'N 25°27'E; 1 ♂ (last moult 06.06.1998); 05.06.1998. – Cyclades, Koronido (650-750m), 37°09'N 25°37'E; 1 ♂, 2 ♀ (last moult of 1 ♀ 28.06.1998); 08.06.1998. – Cyclades, Kato Potamia, 37°06'N 25°26'E; 2 ♂, 1 ♀ (last moult of ♀ 12.06.1998); 10.06.1998. – Cyclades, Dimitra /Ano Sangri, 37°02'N 25°26'E; 2 ♂, 1 ♀ (last moults of 1 ♂ 12.06, ♀ 22.07.1998); 11.06.1998.

DESCRIPTION: Prosoma tawny-brown, with faint blackish markings. Opisthosoma blackish, with medium-long dark hairs. Legs blackish to middle of femora, tarsi tawny. Leg spination: Metatarsi I v000; II v220. – ♂ from Naxos: Total length 6.33. Prosoma 2.50 long, 1.90 wide, 1.00 wide at level of posterior eyes. Eye sizes and interdistances: AME 0.07, ALE 0.13, PME 0.11, PLE 0.09; AME-AME 0.06, AME-ALE 0.01, PME-PME 0.03, PME-PLE 0.05, ALE-PLE 0.06. MOQ length 0.29, front width 0.44, back width 0.50. Clypeus: 0.11 from AME, 0.07 from ALE. Pedipalp (Figs 22-28): Patella dorsally longer than tibia. Strong and short pedipalpal tibia. Retrolateral tibial apophysis equal or longer than dorsal length of tibia (shorter in *Z. tenuis*) and width of pedipalpal tibia less than dorsal length of tibia (Fig. 28). Embolus short (Figs 22-24). Scutum 1/5 of opisthosoma length. – ♀ from Naxos: Total length 6.00. Prosoma 2.20 long, 1.60 wide, 0.92 wide at level of posterior eyes. Eye sizes and interdistances: AME 0.07, ALE 0.10, PME 0.10, PLE 0.08; AME-AME 0.03, AME-ALE 0.01, PME-PME 0.03, PME-PLE 0.03, ALE-PLE 0.06. MOQ length 0.23, front width 0.38, back width 0.45. Clypeus: 0.08 from AME, 0.06 from ALE. Epigynum (Fig. 29): Anterior anchoring pockets wider than lateral folds. Vulva (Figs 30-31): Long median ducts, straight or slightly curved, with a sharp bend, close to the insemination pore.



FIGS 22-31

Zelotes babunaensis. (22-28) Left male palp. (22) Ventral view (median apophysis expanded), from Crete. (23) Id., from Eubea. (24) Id., from Naxos. (25) Id., retrolateral view. (26) Distal part cleared, dorsal view. (27) Apical view. (28) Diagram of tibia, retrolateral view. (29) Epigynum from Eubea. (30) Id., vulva, dorsal view. (31) Id., from Naxos. Bold lines indicate epigynal folds. Scale lines 0.2 mm.

REMARKS: Drensky's (1929: pl. 1, fig. 3) and Deltsev's (2003: fig. 8) illustrations leave no doubt about the validity of this species. It is more abundant in Greece than the rare *Z. tenuis*, both are sympatric with *Z. fulvaster*.

***Zelotes fulvaster* (Simon, 1878)**

Figs 32-39, 75

Prothesima fulvastra Simon, 1878: 96, pl. 14, fig. 30 (description of ♀).

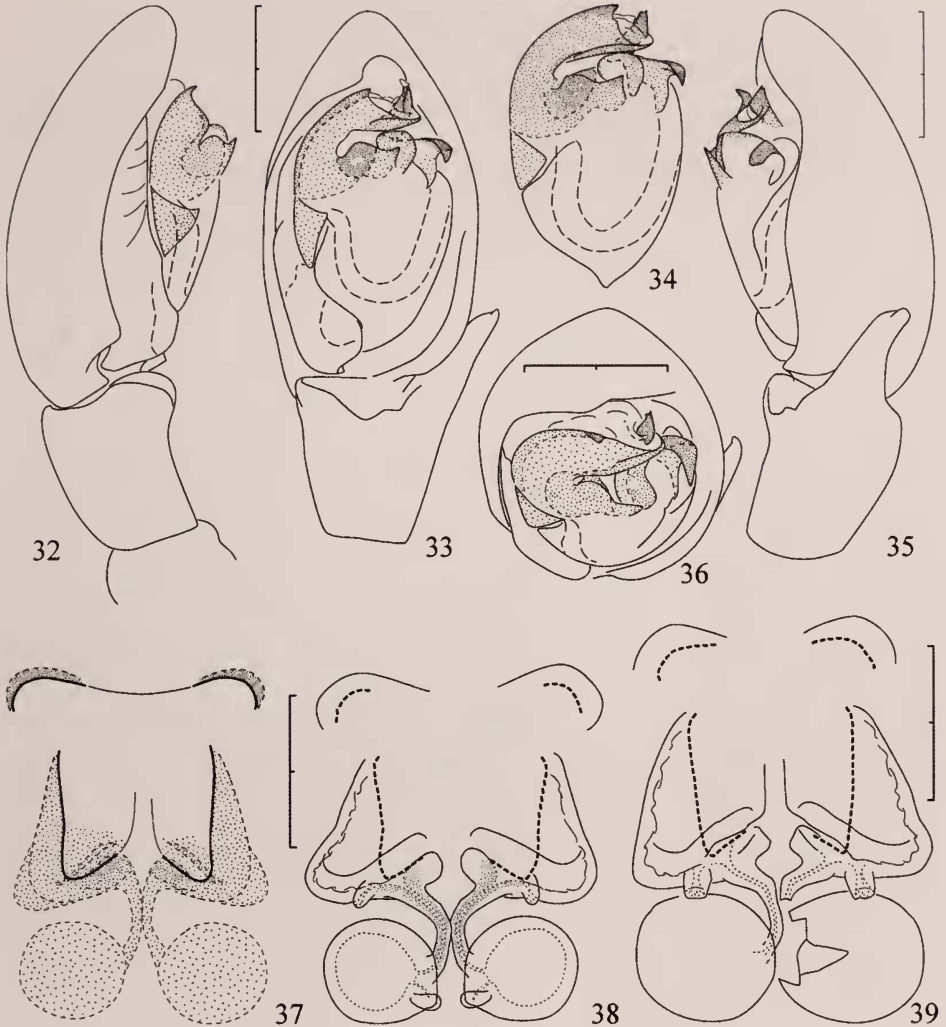
Zelotes fulvaster. – Simon, 1914: 168, 219, fig. 345 (description of ♀). – Jézéquel, 1962: 603, fig. 26 (description of ♀).

Zelotes tenuis. – Deltsev, 2004: 72, figs 9-10 (misidentification).

TYPE MATERIAL: Muséum National Histoire Naturelle, Paris, collection Simon, jar 568, no. 1748, 1 ♀ deprived of epigynum and 1 slide PM52, presumably from Porto Vecchio, Corse (Simon, 1878: 96 and Jézéquel, 1962: 603).

OTHER MATERIAL EXAMINED: GREECE, Macedonia, Thessaloniki, Aghios Vassilios, 40°40'N 23°07'E; 1 ♀ (last moult 25.07.1998); 14.06.1998. – Thessaloniki, West of Aghios Vassilios (vegetation), 40°41'N 23°05'E; 2 ♂, 1 ♀ (last moults of ♂ 25 and 27.06, of ♀ 27.06.2008); 31.05.2008. – Thessaloniki, East of Apollonia (under stones), 40°37'N 23°32'E; 1 ♂; 01.06.2008. – Sterea Hellas, Phthiotidas, Theologos (Glyphada), 38°39'N 23°14'E; 2 ♀ (with vulva in microvial); 20.06.1970. – Phthiotidas, Near Malesina, 38°37'N 23°13'E; 1 ♂ (last moult 09.06.1998); 21.05.1998. – Same; 1 ♂, 1 ♀ (last moult of ♀ 12.06.2008); 08.06.2008. – Phthiotidas, north of Malesina, 38°38'N 23°14'E; 1 ♀; 19.06.2008. – Eubea, Theologos, 38°29'N 23°47'E; 1 ♂, 1 ♀ (last moult of ♀ 28.06.2008); 11.06.2008. – Peloponnesos, Argolida, Palaia Epidauros, 37°39'N 23°09'E; 1 ♀ (last moult 29.07.1998); 14.05.1998. – Cyclades, Naxos, north of Aghios Prokopios (under vegetation), 37°05'N 25°21'E; 2 ♂ (with palpus in microvial), 1 ♀ (last moults of ♂ 14. And 18.06, of ♀ 24.07.1998); 06.06.1998. – Cyclades, Naxos, Kato Potamia, 37°06'N 25°26'E; 1 ♀ (last moult 25.06.1998); 10.06.1998. IRAN, Esfahan, Falávarián, 32°34'N 51°31'E; 1 ♂; 14.06.1974. – Fars, Khohkiluyeh, Arow, 30°35'N 50°43'E; 1 ♂, 2 ♀ (with palpus and vulva in microvial); 24.05.1974. – Khohkiluyeh, Basht, 30°20'N 51°15'E; 2 ♀; 25.05.1974. – Khohkiluyeh, Bishápour, 29°47'N 51°35'E; 1 ♂; 28.05.1974. – Khohkiluyeh, Aliábád, 30°01'N 53°00'E; 1 ♀; 09.06.1974.

DESCRIPTION: Prosoma tawny, with faint blackish marking. Opisthosoma dorsally blackish, ventrally grey, covered with medium-long dark hairs. Legs tawny. Iranian specimens entirely tawny. – ♂ from Naxos (in parentheses from Arow, Iran): Total length 4.75. Prosoma 1.86 (2.00) long, 1.40 (1.46) wide, 0.70 (0.80) wide at level of posterior eyes. Eye sizes and interdistances: AME 0.06 (0.07), ALE 0.10 (0.11), PME 0.11, PLE 0.07 (0.86); AME-AME 0.06, AME-ALE 0.01, PME-PME 0.01, PME-PL 0.02, ALE-PL 0.04. MOQ length 0.24, front width 0.34, back width 0.41. Pedipalp (Figs 32-36): Tibia and patella dorsally of same length. Width of pedipalpal tibia and length of retrolateral apophysis about equal to dorsal length of tibia (cf. Fig. 28). Median apophysis with a large rounded concave retrolateral flap. Small hook-shaped, retrolaterally directed apical projection present on apical margin of embolar base (Figs 33-34). Hook separated from the short embolus by a concave ventral margin of embolar base. Retrolateral tibial apophysis dorsally arched. Scutum occupying 30% of opisthosoma length. Leg spination: Metatarsus I v000; some large Iranian specimens with additional retrolateral spines on metatarsi III & IV. – ♀ from Naxos: Total length 5.20. Prosoma 2.25 long, 1.75 wide, 0.91 wide at level of posterior eyes. Eye sizes and interdistances: AME 0.08, ALE 0.12, PME 0.12, PLE 0.09; AME-AME 0.04, AME-ALE 0.01, PME-PME 0.03, PME-PL 0.04, ALE-PL 0.04. MOQ length 0.30, front width 0.42, back width 0.47. Epigynum (Figs 37, 75): Side of epigynal fold almost straight, making an acute posterior bend. Posterior part of epigynal pouch strongly



Figs 32-39

Zelotes fulvaster. (32-36) Left male palp. (32) Prolateral view. (33) Ventral view. (34) Id., Iranian specimen. (35) Retrolateral view. (36) Apical view. (37) Epigynum. (38) Vulva, dorsal view. (39) Id., Type "PM52" in MNHN Paris. Bold lines indicate epigynal folds. Scale lines 0.2 mm.

widened. Vulva (Figs 38-39): Lateral pouch widened, dorsally with a cuticular fold along its posterior margin, this fold sometimes visible on epigynum as an oblique darker line. Leg spination: Metatarsus I v000.

***Zelotes tenuis* (L. Koch, 1866)**

Figs 40-49, 72

Drassus tenuis L. Koch, 1866: 101, pl. 4, figs 65-66 (description of ♂).

Zelotes tenuis. – Platnick, 1989: 489 (new combination). – Levy, 1998: 131, figs 78-81.

Prosthesima fusco-testacea Simon, 1878: 97, pl. 14, fig. 31 (description of ♀) **syn. n.**

Zelotes fuscotestaceus. – Simon, 1914: 168, 218, fig. 344 (description of ♀). – Denis, 1952: 123, fig. 19. – Jézéquel, 1962: 604, fig. 30.

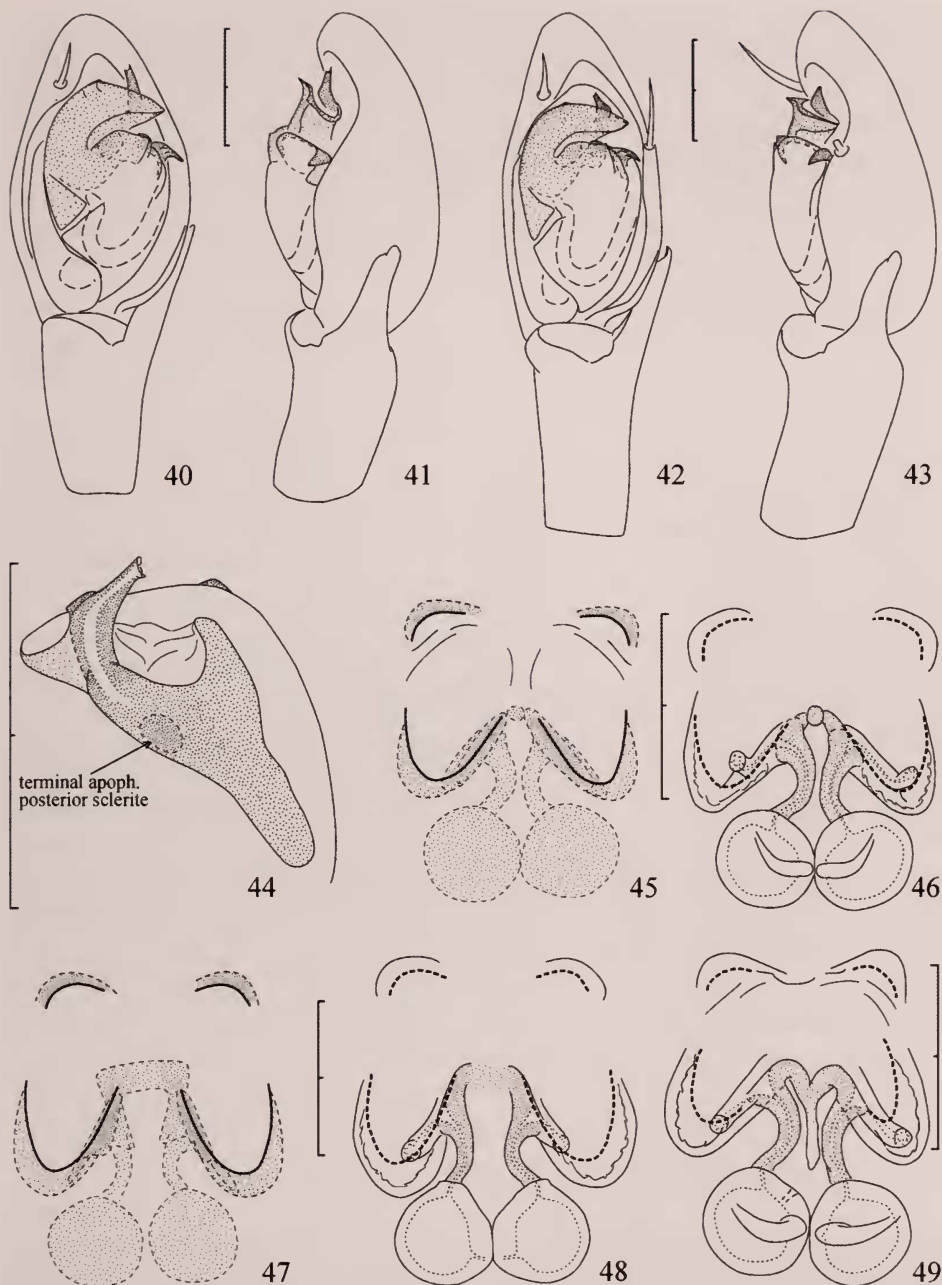
Prosthesima circumspecta Simon, 1878: 94, pl. 14, fig. 26 (description of ♂ and ♀). – Chyzer & Kulczynski, 1897: 205, pl. 8, figs 2, 20.

Zelotes circumspectus. – Simon, 1914: 157, 168, 219, figs 295-296, 342-343. – Denis, 1952: 123, fig. 20. – Jézéquel, 1962: 604, fig. 27.

Prosthesima pallida O. P. – Cambridge, 1874: 383, pl. 51, fig. 11 (description of ♂ and ♀).

Zelotes pallidus. – Platnick & Shadab, 1983: 185, figs 259-262 (description of ♂ and ♀).

MATERIAL EXAMINED: GREECE, Macedonia, Thessaloniki, Aghios Vassilios, 40°40'N 23°07'E; 1 ♂, 3 ♀ (last moults of ♀ 18-27.06.1998); 14.06.1998. – Thessalia, Larissa, Omílion-Tempé, 39°53'N 22°37'E; 1 ♀; 17.06.1970. – Sterea Hellas, Phthiotidas, Theologos (Glyphada), 38°39'N 23°14'E; 1 ♀; 20.06.1970. – Same; 1 ♀ (last moult 18.06.2005); 04.06.1978. – West of Malesina, 38°37'N 23°13'E; 1 ♂; 25.09.2004. – Same; 1 ♀ (last moult 12.06.2008); 08.06.2008. – SPAIN, Catalonia, Barcelona, Gelida, 41°27'N 01°51'E; 1 ♂ (with darker opisthosoma, 1 juv.); 14.06.1971. – Levant / Murcia, Valencia, La Albufera, 39°21'N 00°19'W; 2 ♂; 16.06.1971. – Montroy, 39°20'N 00°35'W; 1 ♀; 22.06.1971. – Alicante, Elche (under palm grove), 38°17'N 00°42'W; 4 ♂, 3 ♀ (last moults of 1 ♂ 05.06.2002, of ♀ 11-14.06.2002); 15.05.2002. – Elda, 38°30'N 00°47'W; 2 ♂; 19.06.1971. – Murcia, Archena, 38°07'N 01°17'W; 1 ♀; 30.06.1971. – Same; 2 ♂, 2 ♀ (last moults of ♂ 26.05.2002, of ♀ 10 and 21.07.2002); 17.05.2002. – Castilla / Leon, Valladolid, Peñafiel, 41°35'N 04°08'W; 1 ♂; 23.06.2002. – Nueva Castilla / La Mancha, Madrid, Navalcarnero, 40°18'N 03°56'W; 2 ♂; 12.06.1969. – Madrid, Aldea del Fresno (rio Alberche), 40°19'N 04°13'W; 1 ♀; 13.06.1969. – Toledo, Escalona del Alberche, 40°10'N 04°24'W; 1 ♂; 14.06.1969. – Toledo, Cardiel de los Montes (rio Alberche), 40°02'N 04°39'W; 1 ♂, 1 ♀; 15.06.1969. – Toledo, Urda / Consuegra, 39°25'N 03°42'W; 2 ♀; 12.08.1969. – Albacete, Hellín, 38°29'N 01°37'W; 1 ♂; 29.06.1971. – Albacete, La Gineta (rio Jucar, fine leaf litter), 39°10'N 01°58'W; 6 ♂; 16.05.2002. – Ciudad Real, Caracuel (laguna), 38°50'N 04°04'W; 3 ♀; 04.08.1969. – Estremadura, Cáceres, Jarandilla (rio Tietar, in litter on sand), 40°01'N 05°37'W; 1 ♂, 4 ♀ (last moult of 1 ♀ 03.08.2009); 15.06.2009. – Cáceres, west of Jarandilla (in litter in vegetation), 40°08'N 05°40'W; 2 ♂, 1 ♀ (last moult of ♀ 22.06.2009); 16.06.2009. – Badajoz, south of Venta del Culebrín / Monesterio, 37°58'N 06°14'W; 1 ♂; 19.06.1969. – Badajoz, Venta del Culebrín / Monesterio, 38°01'N 06°13'W; 11 ♂, 1 ♀; 19.06.1969. – Same; 3 ♂ (last moults of 2 ♂, 07 and 25.06.2002); 04.06.2002. – Badajoz, Rio Guadalemar / Garbayuela, 39°03'N 04°59'W; 2 ♀; 17.08.1969. – Badajoz, Rio Sillo (Higuera la Real), 38°06'N 06°41'W; 2 ♂ (last moult of 1 ♂ 11.06.2002); 09.06.2002. – Badajoz, south of Monesterio (under stones in vegetation), 38°03'N 06°14'W; 10 ♂, 5 ♀ (last moults of 3 ♂ 6-12.06.2010, of 4 ♀ 07.5-20.06.2010); 05.06.2009. – Andalucía, Almería, Adra (La Albufera), 36°45'N 02°57'W; 2 ♀; 08.07.1971. – Same (cultivated dry pond), 36°46'N 02°58'W; 4 ♂, 2 ♀; 25.05.2002. – Granada, La Rábida / Albuñol, 36°45'N 03°10'W; 3 ♀; 09.07.1971. – Ugijar, 36°59'N 03°04'W; 1 ♀; 15.07.1971. – Jaén, Cañada de las Hazadillas (under *Pinus*), 37°39'N 03°43'W; 3 ♂, 1 ♀ (last moults of ♂ 03.06.2002, of ♀ 11.07.2002); 30.05.2002. – Córdoba, Palma del Río; 1 ♂; 03.06.1967. – Córdoba, Palma del Río, 37°43'N 05°18'W; 4 ♂, 3 ♀; 26.06.1969. – Córdoba, Almodóvar del Río (Breña dam), 37°50'N 05°04'W; 1 ♀; 28.06.1969. – Córdoba, Pantano de la Breña (evergreen oak litter), 37°51'N 05°04'W; 5 ♂, 8 ♀ (last moults of 4 ♂ 2-12.06.2002, of ♀ 02.6-16.07.2002); 01.06.2002. – Córdoba, Almodóvar del Río (Breña dam), 37°50'N 05°04'W; 1 ♂ (last moult ♂ 14.06.2009); 01.06.2009. – Córdoba, Peñarroya, 38°17'N 05°16'W; 1 ♂, 3 ♀ (with vulva in microvial); 30.06.1969. – Córdoba, Los Villares / Córdoba (*Eucalyptus* litter), 37°58'N 04°49'W; 1 ♂ (last moult 02.06.2009); 31.05.2009. – Córdoba, Palma del Río (Retortillo dam, leaf litter), 37°51'N 05°22'W; 1 ♂; 03.06.2009. – Málaga, Ronda, 36°46'N 05°13'W; 1 ♀; 21.07.1969. – Málaga, Estepona, 36°25'N 05°11'W; 1 ♀; 25.07.1969. – Málaga, Torre de Mar, 36°44'N 04°07'W; 2 ♀; 27.07.1969. – Málaga, Valle de Abdalagis / Antequera, 36°56'N 04°41'W; 1 ♀; 28.07.1969. – Sevilla, Lebrija (rio del Salado); 2 ♂; 06.06.1967. – Sevilla, Alcalá del Río, 37°31'N 05°59'W; 3 ♀; 22.06.1969. – Sevilla, rio Viar / Castilblanco, 37°42'N 05°53'W; 1 ♀; 24.06.1969. – Same, 37°43'N 05°53'W; 8 ♂, 10 ♀ (with palpus and vulva in microvial, last moults of 3 ♂ 09.6-9.07.2002, of 6 ♀ 07.6-27.07.2002); 02.06.2002. – Sevilla, Cantillana, 37°37'N 05°50'W; 1 ♂; 26.06.1969. – Sevilla, Alanís, 38°02'N 05°11'W; 1 ♂; 01.07.1969. – Sevilla, Sanlúcar la Mayor, 37°22'N 06°14'W;



FIGS 40-49

Zelotes tenuis. (40-44) Left male palp. (40) Greek specimen, ventral view. (41) Id., retrolateral view. (42) Spanish specimen, ventral view. (43) Id., retrolateral view. (44) Id., cleared, dorsal view. (45) Greek specimen, epigynum. (46) Id., vulva, dorsal view. (47) Spanish specimen, epigynum. (48) Id., vulva, dorsal view. (49) Id., variant. Bold lines indicate epigynal folds. Scale lines 0.2 mm.

4 ♀; 17.07.1969. – Sevilla, Coripe (rio Guadalete), 36°58'N 05°26'W; 1 ♀; 18.07.1969. – Sevilla, east of Cazalla de la Sierra (deep leaf litter), 37°57'N 05°45'W; 2 ♂, 3 ♀ (last moults of 1 ♂ 16.06.2009, of 2 ♀ 29.06.2009); 04.06.2009. – Sevilla, Rivera de Benalija (Pintado dam), 38°02'N 05°55'W, 4 ♂, 3 ♀ (last moults of 2 ♂ 5 and 12.06.2009, of ♀ 21.7-02.08.2009); 05.06.2009. – Cadiz, Algodonales, 36°53'N 05°27'W, 1 ♀, 19.07.1969. – Huelva, Santa Olalla (rio Cala), 37°55'N 06°11'W, 2 ♀, 04.07.1969. – Same, 2 ♂, 05.06.2002. – Huelva, Zufre (rivera Huelva), 37°51'N 06°19'W, 1 ♀, 04.07.1969. – Huelva, Zalamea la Real, 37°41'N 06°39'W, 1 ♂, 2 ♀, 10.07.1969. – Huelva, Moguer, 37°16'N 06°50'W, 1 ♀, 11.07.1969. – Huelva, Torre de Oro /Mazagón, 37°05'N 06°43'W, 1 ♀, 13.07.1969. – Huelva, Alajar /Aracena, 37°52'N 06°40'W; 2 ♂, 1 ♀; 07.07.1969. – Same (cork-oak leaf litter), 37°52'N 06°41'W; 1 ♂, 1 ♀ (last moult of ♀ 08.08.2009); 09.06.2009. – Huelva, Puerto Gil /Aracena (cork-oak leaf litter), 37°53'N 06°29'W; 10 ♂ (3 large males, others small), 3 ♀ (last moults of 2 ♀ 17.06 and 20.07.2009); 07.06.2009. – Huelva, Fuenteheridos (deep leaf litter), 37°54'N 06°40'W; 3 ♂, 3 ♀ (last moults of 1 ♂ 14.06.2009, of ♀ 14.06-02.07.2009); 12.06.2009. PORTUGAL, Extremadura, Setubal, Azinheira dos Bairros, 38°04'N 08°25'W; 1 ♀; 02.08.1971. FRANCE, Corse, Nord Corse, Ponte Leccia; 2 ♂; 02.06.1971. – Nord Corse, Above Ponte Leccia (under gravel, river); 4 ♂, 10 ♀; 20.06.1999. – Nord Corse, Above Barchetta (Golo river, under dry vegetation); 2 ♂, 2 ♀; 21.06.1999. – Nord Corse, Biguglia pond /Bastia; 1 ♀; 23.06.1999. – Sud Corse, Ajaccio (Gravone river); 1 ♂; 01.06.1971. – Sud Corse, Portigliolo /Propiano (under vegetation & stones); 1 ♀; 17.06.1999. – Sud Corse, Sartène, Acorane bridge; 3 ♂, 2 ♀ (last moults of ♀ 20 and 22.06.1999); 19.06.1999. – Provence / Côte d'azur, Var, Porquerolles (in litter), 43°00'N 06°12'E; 2 ♂, 4 ♀ (last moults of ♂ 13.06.2001, of ♀ 19.07.2001); 23.06.2001. – Languedoc, Hérault, Les Ouglous /Agde, (Etang de Thau), 43°20'N 03°33'E; 3 ♀ (last moult of 1 ♀ 08.07.2001); 26.06.2001. – Pyrenees Orientales, Arles sur Tech, 42°27'N 02°36'E; 1 ♀; 01.07.2001. – ITALY, Sardinia, Sassari, Platamona /Porto Torres (damp leaf litter); 6 ♂, 4 ♀; 25.05.1999. – Sassari, Castelsardo; 8 ♂, 5 ♀ (last moults of 2 ♂ 5 and 20.06.1999, of 4 ♀ 05.06-03.07.1999); 26.05.1999. – Sassari, Stagno di Calich /Alghero; 3 ♂, 3 ♀; 29.05.1999. – Sassari, Porto di Vignola; 1 ♀ (last moult 27.07.1999); 12.06.1999. – Nuoro, Iago alto de Flumendosa; 8 ♂, 8 ♀ (last moults of ♂ 11-27.06.1999, of ♀ 10.6-31.07.1999); 08.06.1999. – Nuoro, Cala Ginepro /Orosei (under Juncus); 1 ♂, 3 ♀ (last moults of ♀ 13-16.06.1999); 10.06.1999. – Cagliari, Quartu (laguna); 1 ♀; 15.09.1968. – Same; 6 ♂, 14 ♀ (spiders with strong size variation); 03.06.1999. – Calabre, Cosenza, Tarsia /Crati valley; 1 ♀; 04.08.1968.

DESCRIPTION: Prosoma tawny-brown, with faint marking. Opisthosoma dorsally blackish, ventrally grey, covered with medium-long dark hairs. Legs with blackish marking up to mid-length of femora, tarsi tawny. Leg spination: Metatarsi I v000; II v220. – ♂ from Greece (from Spain in parentheses): Total length 4.8 (6.0). Prosoma: 2.25 (2.8) long, 1.58 (1.94) wide, 0.86 (1.07) wide at level of posterior eyes. Eye sizes and interdistances: AME 0.08 (0.10), ALE 0.11 (0.14), PME 0.10 (0.14), PLE 0.10 (0.10); AME-AME 0.06 (0.07), AME-ALE 0.01 (0.01), PME-PME 0.02 (0.03), PME-PLE 0.03 (0.04), ALE-PLE 0.06 (0.07). MOQ length 0.24 (0.31), front width 0.40 (0.48), back width 0.44 (0.53). Clypeus: 0.08 (0.12) from AME, 0.04 (0.07) from ALE. Width of pedipalpal tibia 2/3 of its length or less (cf. Fig. 28). Retrolateral tibial apophysis shorter than dorsal length of tibia. Small triangular apical projection on embolar base. Scutum occupying 20% of opisthosoma length. ♀: From Greece (from Spain in parentheses): Total length 5.0 (7.50). Prosoma: 1.96 (2.83) long, 1.43 (2.12) wide, 0.80 (1.21) wide at level of posterior eyes. Eye sizes and interdistances: AME 0.08 (0.10), ALE 0.11 (0.14), PME 0.11 (0.16), PLE 0.11 (0.13); AME-AME 0.04 (0.05), AME-ALE 0.01 (0.01), PME-PME 0.01 (0.03), PME-PLE 0.02 (0.03), ALE-PLE 0.05 (0.07). MOQ length 0.28 (0.35), front width 0.38 (0.50), back width 0.41 (0.57). Clypeus: 0.08 (0.13) from AME, 0.07 (0.07) from ALE. Epigynum and vulva (Figs 45-49, 72). Anterior epigynal margin narrower (rarely equal to) than width of

epigynal folds (Figs 45-49). Posterior vulval pouches small. Epigynal folds reaching middle length of epigynum in its centre, forming a large triangle separating the oblique lateral membranous areas.

REMARKS: Jézéquel's (1962: fig. 30) drawing of the vulva of *Z. fuscotestaceus* (presumably the holotype: "tube 1897, Plouharnel, Morbihan") shows the vulva of a *Z. tenuis*. Simon (1914, footnote on page 168) himself expressed doubts about the status of *Z. fuscotestaceus* in relation to *Z. tenuis* (under circumpectus). I have not been able to see the type specimen of *Z. fuscotestaceus*.

***Zelotes chaniaensis* sp. n.**

Figs 50-58, 79

Z. tenuis. – Chatzaki *et al.*, 2003: 80, figs 105-107, 111-112 (rare form, misidentification), not figs 108-110, 113-114 = *Z. babunaensis*.

HOLOTYPE: GREECE, Crete, Chania, Episkopi, 35°30'N 23°46'E; ♂ (with palpus in microvial, last moult 04.01.2000); 10.10.99.

PARATYPE: Same locality and collecting date as for holotype; 1 ♀ (with vulva in microvial, last moult 19.01.2000).

ETYMOLOGY: The species name, an adjective, refers to the city of Chania on the island of Crete.

DIAGNOSIS: The male differs from that of *Z. tenuis* by a hook-like distal embolar base tooth (Figs 50-53); the female with shorter median ducts; anterior anchoring pockets wider than lateral folds and folded cuticle in median sector (Figs 57-58, 79).

DESCRIPTION: Prosoma tawny-brown, with faint marking. Opisthosoma dorsally blackish, ventrally grey, covered with medium-long dark hairs. Legs with faint marking; tarsi tawny. Leg spination: Metatarsi I v210; II v220. – ♂: Total length 5.50. Prosoma: 2.20 long, 1.66 wide, 0.90 wide at level of posterior eyes. Eye sizes and interdistances: AME 0.08, ALE 0.10, PME 0.10, PLE 0.08; AME-AME 0.04, AME-ALE 0.01, PME-PME 0.04, PME-PLE 0.03, ALE-PLE 0.04. MOQ length 0.27, front width 0.40, back width 0.44. Clypeus: 0.11 from AME, 0.06 from ALE. Pedipalp (Figs 50-53): Patella dorsally slightly longer than tibia. Width of pedipalpal tibia 3/4 of its length or less (cf. Fig. 28). Retrolateral tibial apophysis shorter than dorsal length of tibia. Scutum occupying 1/4 of opisthosoma length. – ♀: Total length 5.40. Prosoma: 2.33 long, 1.55 wide, 0.80 wide at level of posterior eyes. Eye sizes and interdistances: AME 0.07, ALE 0.11, PME 0.08, PLE 0.08; AME-AME 0.06, AME-ALE 0.01, PME-PME 0.04, PME-PLE 0.028, ALE-PLE 0.05. MOQ length 0.26, front width 0.37, back width 0.41. Clypeus: 0.07 from AME, 0.06 from ALE. Epigynum (Figs 57-58).

REMARK: *Z. chaniaensis* seems to be a Cretan endemic replacing *Z. tenuis* on that island.

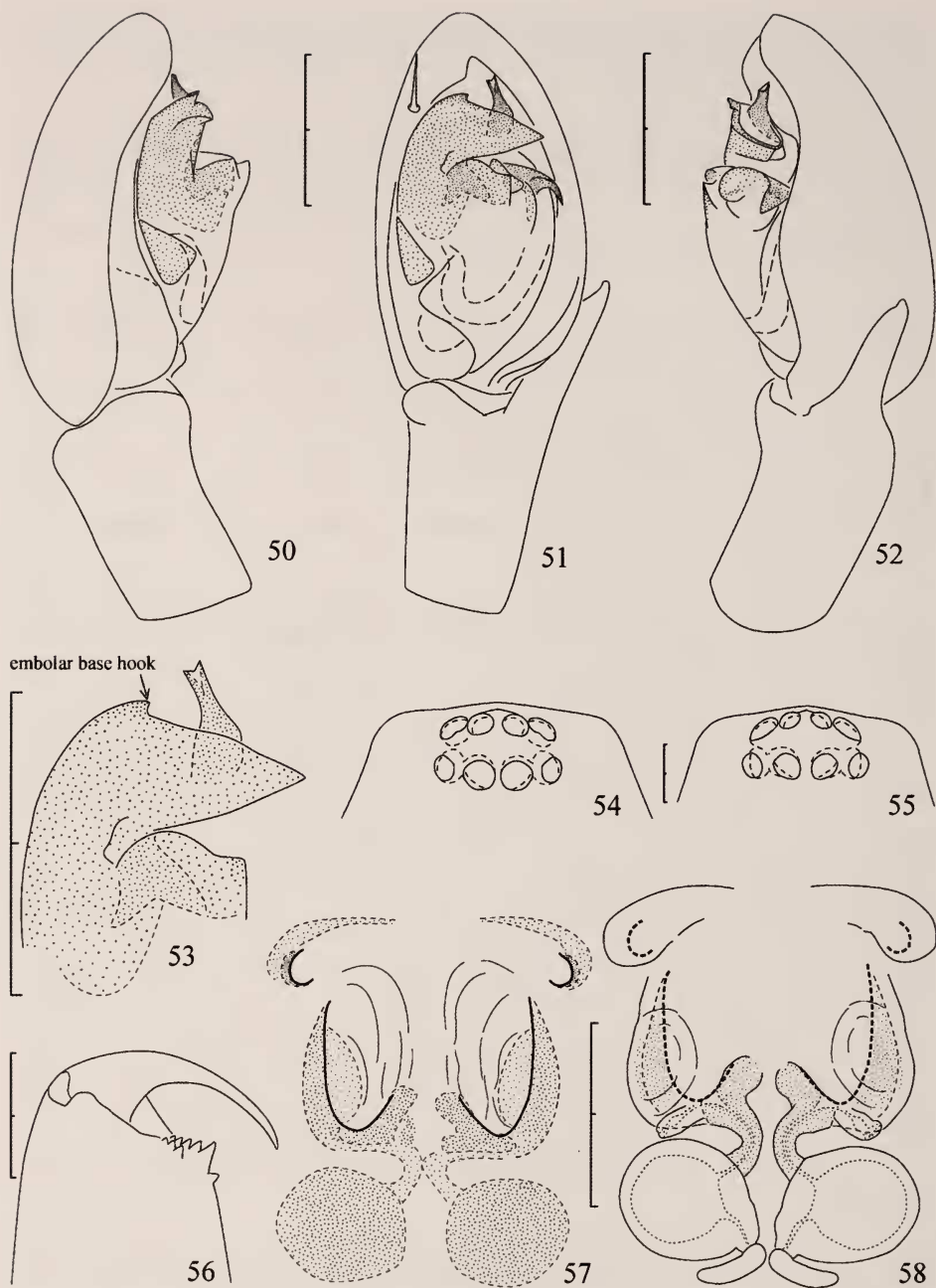
***Zelotes manytchensis* (Ponomarev & Tsvetkov, 2006) comb. n.**

Figs 59-64, 77

Trachyzelotes manytchensis Ponomarev & Tsvetkov, 2006: 11, figs 18-19 (description of ♂ and ♀).

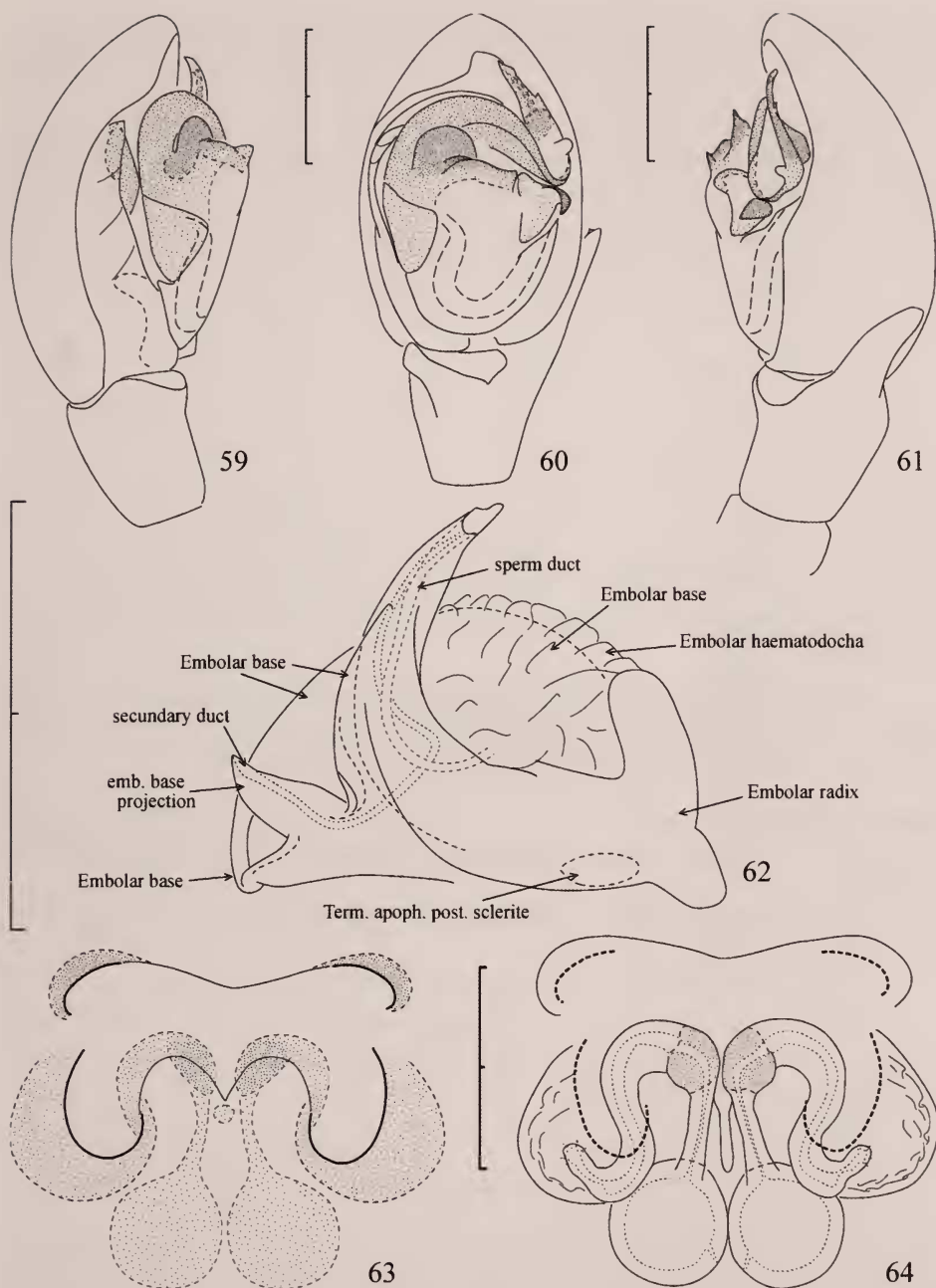
MATERIAL EXAMINED: IRAN, Khohkiluyeh, Dogonbadán, 30°22'N 50°47'E; 1 ♂, 2 ♀ (with palpus and vulva in microvials); 21.05.1974.

DIAGNOSIS: ♂ pedipalp (Figs 59-62): The retrolateral loop of the embolar base, which reaches far below the level of terminal apophysis, and its membranous retro-



FIGS 50-58

Zelotes chaniaensis sp. n. (50-53) Left male palp. (50) Prolateral view. (51) Ventral view. (52) Retrolateral view. (53) Embolar base, ventral view. (54) Male, ocular group. (55-58) Female. (55) Ocular group. (56) Left chelicera, ventral view. (57) Epigynum. (58) Vulva, dorsal view. Bold lines indicate epigynal folds. Scale lines 0.2 mm.



FIGS 59-64

Zelotes manytchensis. (59-62) Left male palp. (59) Prolateral view. (60) Ventral view. (61) Retrolateral view. (62) Apex of palpal organ, cleared, dorsal-retrolateral view. (63) Epigynum. (64) Vulva, dorsal view. Bold lines indicate epigynal folds. Scale lines 0.2 mm.

lateral projection distinguish *Z. manytchensis* from the other species of the *tenuis*-group. ♀: Epigynum (Figs 63, 77): lateral folds wide apart, with large convex lateral pouches.

DESCRIPTION: Prosoma and legs tawny-brown, lighter tarsi and metatarsi. Opisthosoma greyish brown, covered with short to medium-long hairs. Tarsi I, II entirely scopulate, metatarsi I, II in apical half. – ♂: Total length 4.50. Prosoma: 1.80 long, 1.45 wide. Eye sizes and interdistances: AME 0.07, ALE 0.10, PME 0.10, PLE 0.07; AME-AME 0.05, AME-ALE 0.01, PME-PME 0.01, PME-PLE 0.02, ALE-PLE 0.02. MOQ length 0.20, front width 0.35, back width 0.38. Clypeus: 0.07 from AME; 0.04 from ALE. Pedipalp tawny (Figs 59-62). Tibia dorsally slightly shorter than patella. Retrolateral apophysis longer than tibia (cf. Fig. 28). Embolar base forming a large and low retrolateral loop wearing a membranous projection; a secondary duct (Fig. 62) uniting projection to tip of embolus, as observed in *Drassyllus* (Miller, 1967: table 3, figs 3, 5). Scutum occupying 1/3 of opisthosoma length. Leg spination: Metatarsus I v000. – ♀: Total length 6.20. Prosoma: 1.84 long, 1.36 wide, 0.74 wide at level of posterior eyes. Eye sizes and interdistances: AME 0.07, ALE 0.10, PME 0.08, PLE 0.08; AME-AME 0.05, AME-ALE 0.01, PME-PME 0.02, PME-PLE 0.04, ALE-PLE 0.04. MOQ length 0.21, front width 0.35, back width 0.38. Epigynum (Figs 63-64, 77) with large convex lateral pouches. Vulva (Fig. 64) with almost straight median ducts.

REMARK: Ponomarev & Tsvetkov (2006) described long cheliceral setae for this species. The female resembles a *Trachyzelotes* but lacks a cheliceral brush. The genitalia show a close relationship with the *Zelotes tenuis* species group.

***Zelotes alpujarraensis* sp. n.**

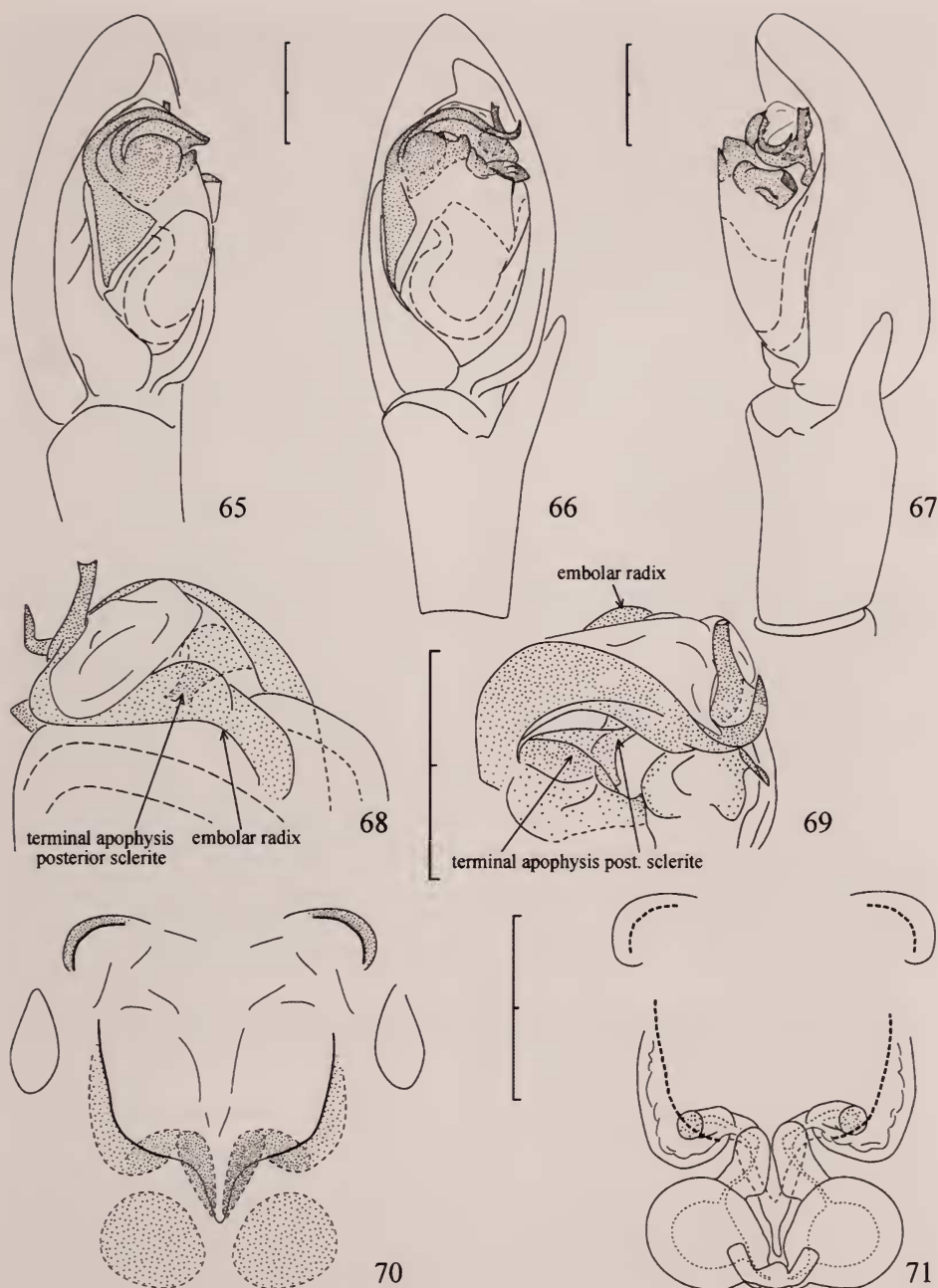
Figs 65-71, 78

HOLOTYPE: SPAIN, Andalucia, Granada, Puerto del Lino, 1200m, 36°48'N 03°18'W; ♂; 26.05.2002.

PARATYPES: Same locality as for holotype; 1 ♂, 3 ♀ (with palpus and vulva in microvial) (last moults of 2 ♀ 02.06 and 27.07.2002).

ETYMOLOGY: The species name refers to the Alpujarras Mountains.

DESCRIPTION: Large species, prosoma and legs dark brown. Opisthosoma blackish, covered with black bristles and prostrate copper-coloured hairs giving a shiny appearance. Leg spination: Tibiae III r111, IV r211; metatarsus II v220. – ♂ paratype: Total length 7.50. Prosoma: 3.33 long, 2.55 wide, 1.50 wide at level of posterior eye. Eye sizes and interdistances: AME 0.08, ALE 0.13, PME 0.10, PLE 0.10; AME-AME 0.07, AME-ALE 0.01, PME-PME 0.07, PME-PLE 0.08, ALE-PLE 0.08. MOQ length 0.30, front width 0.51, back width 0.59. Clypeus: 0.10 from AME, 0.07 from ALE. Pedipalp (Figs 65-69): Tibia 1.5x longer than wide. Retrolateral tibial apophysis shorter than tibia. Patella dorsally longer than tibia. Embolar base developed as a large prolateral bow, with a curled retrolateral projection and a distad-directed embolus. Large, more or less circular terminal apophysis bearing a retrolateral ridge. Scutum occupying 1/4 of opisthosoma length. – ♀: Total length 6.60. Prosoma: 3.00 long, 2.36 wide, 1.28 wide at level of posterior eye. Eye sizes and interdistances: AME 0.08, ALE 0.11, PME 0.08, PLE 0.08; AME-AME 0.07, AME-ALE 0.01, PME-PME 0.07, PME-



FIGS 65-71

Zelotes alpujarraensis sp. n. (65-69) Left male palp. (65) Prolateral view. (66) Ventral view. (67) Retrolateral view. (68) Apex of palpal organ, cleared, dorsal view. (69) Id., apical view. (70) Epigynum. (71) Vulva, dorsal view. Bold lines indicate epigynal folds. Scale lines 0.2 mm.

PLE 0.07, ALE-PLE 0.07. MOQ length 0.26, front width 0.44, back width 0.51. Clypeus: 0.10 from AME, 0.07 from ALE. Epigynum (Fig. 70). Epigynal plate almost square, with short posterior pouches. Vulva (Fig. 71) showing sclerotized median ducts and large spermathecae.

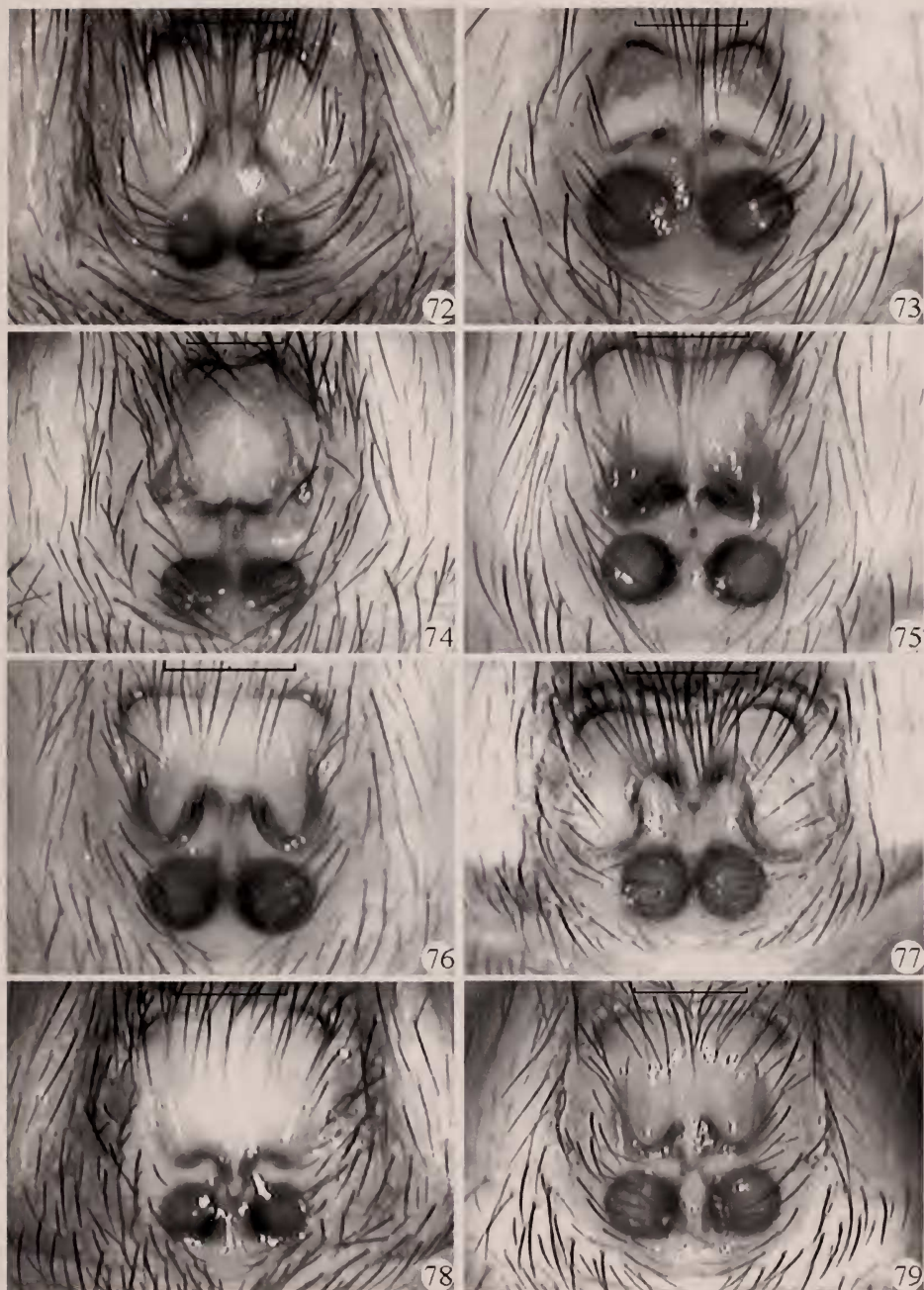
REMARKS: The genitalia of this large and dark species correspond to those of the *Z. tenuis*-group, especially in the male pedipalpal structure. The male posterior ocular row differs from that of the *Z. tenuis*-group (Figs 54-55) in having smaller eyes of equal size separated by 0.7 of their diameter.

Zelotes thorelli-group

DEFINITION: Dark coloured spiders. Long coiled embolus without direct connection to embolar base. Coil turning left on left palp. Embolar base more or less fused to terminal apophysis. Strong embolar radix and posterior sclerite of terminal apophysis at a relatively acute angle (Figs 83, 92, 101).

KEY TO THE SPECIES OF THE *Z. THORELLI*-GROUP

- 1 Large embolar base projection (Figs 81, 89, 100). Epigynum with median posterior notch ***thorelli*-subgroup, 2**
- Short embolar base projection (Figs 108, 115). Epigynum with median posterior protrusion ***fulvopilosus*-subgroup, 5**
- 2 Short posterior epigynal notch; short convolution of median vulval duct (Figs 85-86). Slim transverse embolar base projection (Fig. 81) **4**
- Median posterior epigynal notch occupying 1/3 or more of epigynal plate; convolution of median vulval duct reaching anterior margin of epigynum; embolar base projection wide or depressed (Figs 89, 98, 100) **3**
- 3 Embolar base projection wide, distad-directed. Posterior epigynal notch narrow (Figs 89, 95) ***Z. thorelli***
- Embolar base projection narrow, ribbon-like; embolus with two narrow apophyses (Figs 98, 100-101). Posterior epigynal notch triangular (Fig. 102) ***Z. laconicus* sp. n.**
- 4 Pedipalp widened, with narrow transverse retrolaterad-directed embolar projection (Figs 81-83). Copulatory duct coiled in numerous narrow turns (Figs 86-87) ***Z. pediculatoides* sp. n.**
- Pedipalp elongated, with narrow embolar projection retrolateral-distad directed (Fig. 96; Di Franco, 1994: figs 5-8). Copulatory duct coiled in few turns ***Z. lagrecai***
- Copulatory duct coiled in numerous wide turns (Di Franco, 1994: fig. 9; Levy, 2009: figs 65-66). Male unknown ***Z. pediculatus***
- 5 One-loop retrolateral embolar coil almost reaching base of bulbus. Lateral epigynal pouches elongated, in a posterior position (Figs 106-107, 109) ***Z. flagellans***
- One-loop retrolateral embolar coil reaching mid-length of bulbus. Short lateral pouches extended laterally (Figs 113-114, 116) ***Z. fulvopilosus***



FIGS 72-79

Photos of epigyna. (72) *Zelotes tenuis*. (73) *Z. fuscorufus*. (74) *Z. semirufus*. (75) *Z. fulvaster*. (76) *Z. babunaensis*. (77) *Z. manytchensis*. (78) *Z. alpujarraensis*. (79) *Z. chaniaensis*. Scale lines 0.2 mm.

***Zelotes thorelli*-subgroup**

SPECIES INCLUDED: *Z. thorelli*, *Z. laconicus* sp. n., *Z. pediculatoides* sp. n., *Z. lagrecai* and probably *Z. pediculatus* (male unknown).

***Zelotes pediculatoides* sp. n.**

Figs 80-87

HOLOTYPE: SPAIN, Levant / Murcia, Archena, 38°07'N 01°17'W; ♂ (last moult 14.09.2002); 17.05.2002.

PARATYPES: Same locality as for holotype; 1 ♂ (with palpus in microvial), 1 ♀ (last moult 20.09.2002). – Spain, Albacete, Hoya Gonzalo (under stones, evergreen oak), 38°55'N 01°34'W; 3 ♀; 16.05.2002. – Spain, Extremadura, Caceres, Jarandilla (rio Tietar in litter on sand), 40°01'N 05°37'W; 1 ♀; 15.06.2009 – Spain, Andalucia, Sevilla, Rio Viar /Castilblanco, 37°43'N 05°53'W; 2 ♀; 02.06.2002.

OTHER MATERIAL EXAMINED: SPAIN, Valencia, La Albufera, 39°21'N 00°19'W; 1 ♀; 16.06.1971. – Castellon, Villanueva de Alcolea, 40°14'N 00°03'E; 1 ♀; 07.09.1971. – Alicante, Elda, 38°30'N 00°47'W; 3 ♀ (with vulva in microvial); 19.06.1971. – Alicante, Bullas, 38°02'N 01°39'W; 2 ♀; 04.07.1971. – Same locality (under vegetation); 1 ♀; 18.05.2002. – Nueva Castilla /La Mancha, Madrid, Navalcarnero, 40°18'N 03°56'W; 1 ♀; 12.06.1969. – Madrid, Aldea del Fresno (rio Alberche), 40°19'N 04°13'W; 1 ♀; 13.06.1969.

ETYMOLOGY: The species name reflects the close relationship with *Z. pediculatus* Marinaro.

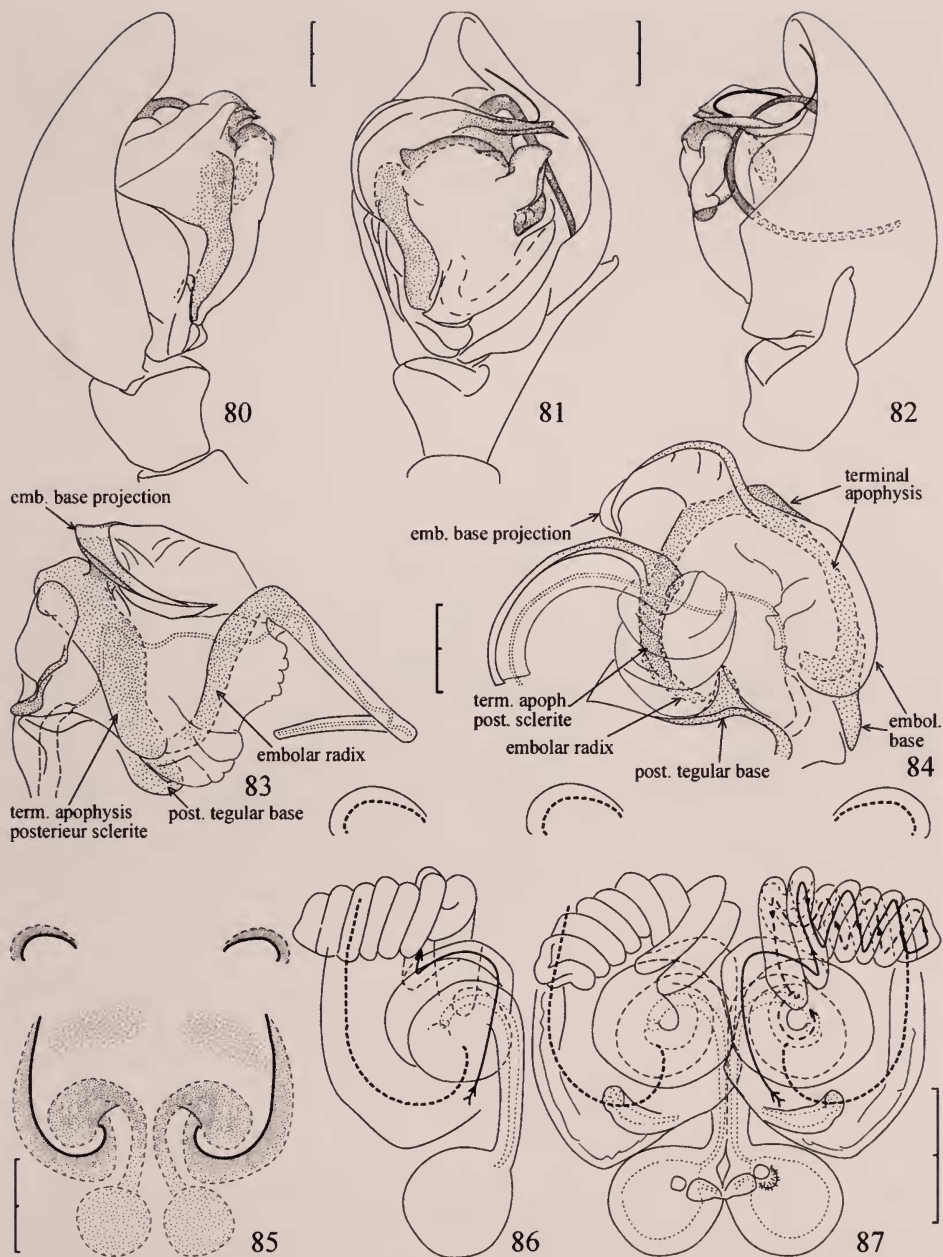
DESCRIPTION: Large dark species. Prosoma dark brown, with black bristles. Opisthosoma black, covered with greyish adpressed hairs and black bristles. Legs dark brown; tarsi feebly lightened. Tarsi and metatarsi I, II entirely scopulate. Posterior eye row straight to slightly recurved. – ♂ paratype: Total length 6.46. Prosoma 3.00 long, 2.30 wide, 1.08 wide at level of posterior eyes. Eye sizes and interdistances: AME 0.07, ALE 0.14, PME 0.10, PLE 0.10; AME-AME 0.07, AME-ALE 0.01, PME-PME 0.05, PME-PLE 0.07, ALE-PLE 0.09. MOQ length 0.28, front width 0.43, back width 0.52. Clypeus: 0.13 from AME, 0.08 from ALE. Pedipalp (Figs 80-84): Patella dorsally longer than tibia. Tibia wider than long. Retrolateral tibial apophysis twice as long as tibia. Terminal apophysis partly fused to embolar base at level of apical projection (Fig. 83). Basal segment of embolar base narrow (? intercalary sclerite); its apical segment with inflated membranous wall. Embolar radix embedded in a large posterior embolar haematodocha, articulated on the posterior tegular base over the terminal apophysis posterior sclerite. Embolar base with long narrow dorsally furrowed apical projection guiding the slim embolus. Coiled embolus bearing a membranous retrolateral flange for about 1/3 of its length; hair-thin tip of embolus resting in a cymbial furrow. Scutum occupying 40% of opisthosoma length. – ♀: Total length 8.00. Prosoma 3.10 long, 2.35 wide, 1.26 wide at level of posterior eyes. Eye sizes and interdistances: AME 0.09, ALE 0.12, PME 0.11, PLE 0.11; AME-AME 0.07, AME-ALE 0.01, PME-PME 0.05, PME-PLE 0.07, ALE-PLE 0.09. MOQ length 0.30, front width 0.46, back width 0.57. Clypeus: 0.13 from AME, 0.07 from ALE. Epigynum and vulva (Figs 85-87): Vulval coils often visible through the cuticle in a transverse to longitudinal position.

***Zelotes thorelli* Simon, 1914**

Figs 88-95

Zelotes thorelli Simon, 1914: 163, 172, 214, figs 320-321, 357 (description of ♂ and ♀). – Jézéquel, 1962: 525, fig. 5 (description of ♀).

MATERIAL EXAMINED: SPAIN, Catalonia, Gerona, Port de la Selva-Qadaquès (under Cistus), 42°18'N 03°13'E; 1 ♂, 3 ♀ (last moult of ♂ 26.09.2004); 23.05.2004. – Gerona, north

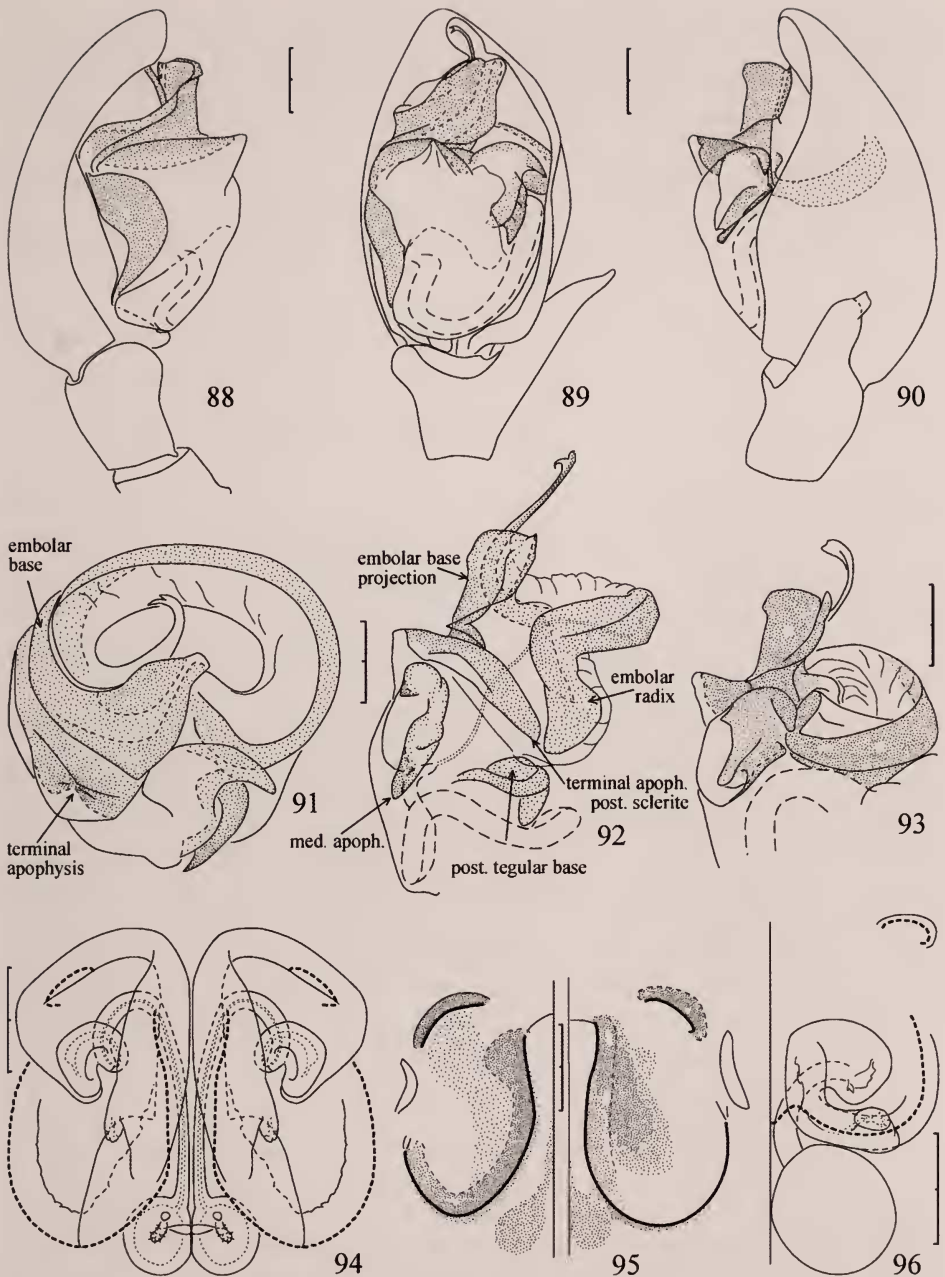


FIGS 80-87

Zelotes pediculatoides sp. n. (80-84) Left male palp. (80) Prolateral view. (81) Ventral view. (82) Retrolateral view. (83) Apex of palpal organ, cleared, retrolateral view. (84) Id., dorsal view. (85) Epigynum. (86) Vulva, ventral view. (87) Id., dorsal view. Bold lines indicate epigynal folds. Scale lines 0.2 mm.

of Portligat (under rocks & *Cistus*), 42°18'N 03°17'E; 2 ♀; 24.05.2004. – Gerona, Cap de Creus (under rosemary, *Cistus*, *Erica*), 42°19'N 03°17'E; 3 ♀; 24.05.2004. – Castilla / Leon, Valladolid, Peñafiel, 41°35'N 04°08'W; 1 ♀ (last moult 23.08.2002); 23.06.2002. – Avila, Arenas San Pedro; 1 ♂ (with palpus in microvial); 19.09.1967. – Nueva Castilla / La Mancha, Albacete, La Gineta (rio Jucar, fine leaf litter), 39°10'N 01°58'W; 1 ♂, 1 ♀ (last moult of ♂ 11.09.2002); 16.05.2002. – Extremadura, Caceres, Montánchez, 39°14'N 06°08'W; 1 ♀; 10.06.2002. – Badajoz, Venta del Culebrin / Monesterio, 38°02'N 06°13'W; 1 ♀; 04.06.2002. – Andalucía, Almería, Puerto Maria, 37°42'N 02°10'W; 1 ♂, 2 ♀ (last moults of ♀ 09.09.2002, of 1 ♀ 04.10.2002); 19.05.2002. – Granada, Puebla de Don Fadrique (*Pinus* + rosemary litter), 38°00'N 02°27'W; 1 ♀ (last moult 09.09.2002); 19.05.2002. – Granada, La Vidriera / Pinar pass, 38°03'N 02°34'W; 1 ♂, 3 ♀ (last moult of ♂ 18.07.2002); 20.05.2002. – Granada, La Calahorra (in pine forest), 37°10'N 03°03'W; 3 ♀; 23.05.2002. – Granada, Road Puerto de la Ragua (in pine forest), 37°09'N 03°03'W; 1 ♂, 1 ♀ (last moult of ♀ 03.09.2002); 24.05.2002. – Granada, above Capileira (1850m), 36°58'N 03°20'W; 1 ♀; 27.05.2002. – Granada, Collado del Muerto (Sierra Nevada, 1450m), 37°08'N 03°28'W; 1 ♀; 29.05.2002. – Jaen, Sierra de Cazorla (Fuente del Oso), 37°55'N 02°56'W; 2 ♂, 2 ♀ (last moult of 1 ♂ 17.09.2002); 21.05.2002. – Jaen, Sierra de Cazorla (Linarejas), 37°55'N 02°55'W; 2 ♀; 22.05.2002. – Jaen, Tiscar pass, 37°48'N 03°03'W; 3 ♀; 23.05.2002. – Jaen, Cañada de las Hazadillas (under *Pinus*), 37°39'N 03°43'W; 1 ♂, 3 ♀ (last moults of ♂ 25.09.2002, of 1 ♀ 02.10.2002); 30.05.2002. – Jaen, Puente de la Sierra, 37°41'N 03°46'W; 1 ♀; 31.05.2002. – Cordoba, Breña dam (in evergreen oak litter), 37°51'N 05°04'W; 1 ♂ (last moult 21.09.2002); 01.06.2002. – Cordoba, Villaviciosa road to Espiel); 1 ♀; 29.06.1969. – Sevilla, Alanis; 1 ♀; 01.07.1969. – Huelva, Linares de la Sierra / Aracena, 37°54'N 06°37'W; 1 ♀; 05.07.1969. – Same; 2 ♀; 05.06.2002. – Huelva, Alajar / Aracena, 37°52'N 06°41'W; 2 ♀ (with vulva in microvial); 07.07.1969. – Same; 2 ♂, 2 ♀ (last moults of ♂ 17-27.09.2002, of 1 ♀ 23.10.2002); 07.06.2002. – Huelva, north of La Nava (schist litter), 38°00'N 06°45'W; 1 ♀; 09.06.2002. – Huelva, Santa Olalla (rio Cala), 37°55'N 06°11'W; 1 ♀; 04.07.1969. – FRANCE, Provence / Cote D'Azur, Basses-Alpes, La Pourcine / Limans, 43°59'N 05°44'E; 2 ♀; 21.06.2001. – Basses-Alpes, Aubenas-des-Alpes, 43°57'N 05°48'E; 1 ♀; 21.06.2001. – Languedoc, Gard, Vénéjan; 1 ♀ (with vulva in microvial); 01.10.1998. – Gard, Aude, Bedos pass / Mouthoumet, 42°58'N 02°34'E; 1 ♀; 30.05.2004. – Eastern Pyrenees, Banyuls sur Mer, 42°28'N 03°07'E; 1 ♂ (last moult 28.08.2001); 27.06.2001. – Eastern Pyrenees, Les Abeilles / Banyuls, 42°28'N 03°04'E; 1 ♂, 2 ♀ (last moult of ♂ 01.10.2001); 28.06.2001. – Eastern Pyrenees, Cerbère (under stones, in *Cistus*), 42°27'N 03°09'E; 2 ♂, 3 ♀ (last moults of ♂ 1-24.09.2004, of 1 ♀ 29.09.2004); 22.05.2004. – Eastern Pyrenees, above Banyuls sur Mer (350m), 42°28'N 03°08'E; 2 ♀; 23.05.2004. ANDORRA, St Julià de Loria (1200m), 42°27'N 01°29'E; 1 ♂, 1 ♀ (last moult of ♂ 17.09.2001); 08.07.2001. – Same (oak litter); 1 ♂, 1 ♀ (last moults of ♂ 19.08.2004, of ♀ 14.09.2004); 25.05.2004.

DESCRIPTION: Prosoma and legs dark brown. Opisthosoma black, with black adpressed hairs and black bristles. Posterior eye row straight or slightly recurved. – ♂: Total length 5.90. Prosoma 2.56 long, 2.00 wide, 0.90 wide at level of posterior eyes. Eye sizes and interdistances: AME 0.07, ALE 0.11, PME 0.09, PLE 0.09; AME-AME 0.05, AME-ALE 0.01, PME-PME 0.04, PME-PLE 0.06, ALE-PLE 0.08. MOQ length 0.24, front width 0.37, back width 0.46. Clypeus: 0.11 from AME, 0.08 from ALE. Pedipalp (Figs 88-93): Patella dorsally slightly longer than tibia. Tibia wider than long. Retrolateral tibial apophysis longer than tibia. Retrolateral tip of terminal apophysis ventrad-directed. Median apophysis with a wide hook and a tapering, strongly developed, retrolaterad-directed apical lobe. Ventrally sclerotized embolar base with a wide distad-directed projection. Large embolus coiled into one revolution, with a wide inflatable membranous flange. Scutum occupying 35% of opisthosoma length. – ♀: Total length 6.20. Prosoma 2.73 long, 2.00 wide, 0.10 wide at level of posterior eyes. Eye sizes and interdistances: AME 0.09, ALE 0.10, PME 0.90, PLE 0.09; AME-AME 0.07, AME-ALE 0.01, PME-PME 0.04, PME-PLE 0.05, ALE-PLE 0.08. MOQ length 0.28,



FIGS 88-96

(88-95) *Zelotes thorelli*. (88-94) Left male palp. (88) Prolateral view. (89) Ventral view. (90) Retrolateral view. (91) Apex of palpal organ, cleared, apical view. (92) Id., retrolateral view. (93) Cymbium discarded, retrolateral view. (94) Vulva, dorsal view. (95) Epigyna, two forms. (96) *Zelotes lagrecai*, vulva, dorsal view. Bold lines indicate epigynal folds. Scale lines 0.2 mm.

front width 0.37, back width 0.46. Clypeus: 0.13 from AME, 0.10 from ALE. Epigynum (Fig. 95). Epigynal notch almost reaching anterior part of median sector. Vulva (Fig. 94) characterized by coiled anterior part of median ducts reaching past anterior epigynal margin.

***Zelotes lagrecai* Di Franco, 1994**

Fig. 96

Zelotes lagrecai Di Franco, 1994: 217, figs 5-8 (description of ♂ and ♀).

MATERIAL EXAMINED: SPAIN, Andalusia, Almeria, Adra (La Albufera), 36°45'N 02°57'W; 1 ♀ (with vulva in microvial); 08.07.1971.

REMARK: Di Franco's (1994: fig. 6) drawing of the male clearly shows that this species belongs to the *Z. thorelli* group. The epigynum of the single female, which I collected in the proximity of a large pond, corresponds entirely to the original drawing (Di Franco, 1994: fig. 7), but has the coiled copulatory duct somewhat reduced (Fig. 96). The biotope has since been completely destroyed for intensive cultivation.

***Zelotes laconicus* sp. n.**

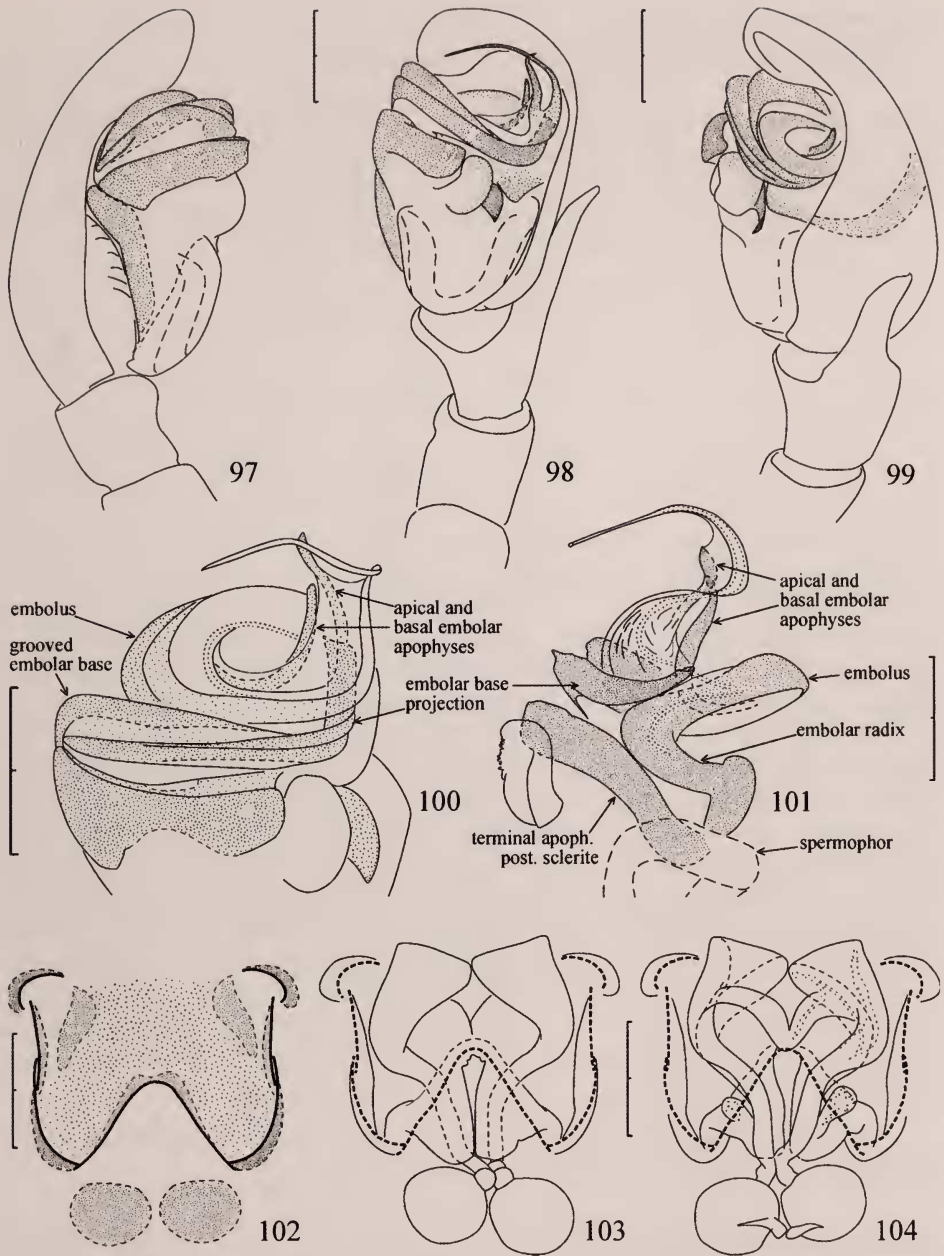
Figs 97-104

HOLOTYPE: GREECE, Peloponnesus, Laconia, Viglafia /Neapolis (in *Juncus* litter on sand), 36°31'N 22°59'E; ♂; 04.10.2010.

PARATYPES: Same locality as for holotype; 1 ♂, 2 ♀ (with vulva and palpus in microvial). – 1 ♀, same, 04.10.2004.

ETYMOLOGY: The species name, an adjective, refers to the Greek province of Laconia.

DESCRIPTION: Large dark species. Prosoma dark brown, with black bristles. Opisthosoma black, covered with numerous black bristles. Legs dark brown, tarsi feebly lightened. Tarsi and metatarsi I, II entirely scopulate. Posterior eye row straight to slightly recurved. One tooth on retromargin of chelicera. – ♂ holotype: Total length 5.00. Prosoma: 2.25 long, 1.70 wide, 0.86 wide at level of posterior eyes. Eye sizes and interdistances: AME 0.06, ALE 0.10, PME 0.08, PLE 0.08, AME-AME 0.06, AME-ALE 0.01, PME-PME 0.04, PME-PLE 0.04, ALE-PLE 0.06. MOQ length 0.21, front width 0.31, back width 0.37. Clypeus: 0.08 from AME, 0.07 from ALE. Pedipalp (Figs 97-101): Patella dorsally longer than tibia. Tibia slightly wider than long. Retrolateral tibial apophysis about as long as dorsal length of tibia. Intercalary sclerite narrow. Grooved embolar base with a ribbon-like depressed retrolateral projection. Embolus coiled; its external part sclerotized, with a wide internal membranous flange reaching end of terminal projection of embolar base (Figs 100-101); at that point emitting an inner twisted apophysis linked with a membrane to the threadlike embolus; an elongated and twisted basal embolar apophysis also present. Scutum occupying 40% of opisthosoma length. – ♀ paratype: Total length 6.33. Prosoma: 2.56 long, 1.92 wide, 1.06 wide at level of posterior eyes. Eye sizes and interdistances: AME 0.06, ALE 0.11, PME 0.10, PLE 0.10; AME-AME 0.04, AME-ALE 0.01, PME-PME 0.04, PME-PLE 0.06, ALE-PLE 0.07. MOQ length 0.27, front width 0.38, back width 0.46. Clypeus: 0.90 from AME, 0.70 from ALE. Epigynum (Fig. 102) wider than long. Sclerotized epigynal plate with a triangular posterior median notch reaching almost mid-length of plate. Vulva (Figs 103-104) characterized by uncoiled bag-like anterior part of median ducts reaching anterior epigynal margin.



FIGS 97-104

Zelotes laconicus sp. n. (97-101) Left male palp. (97) Prolateral view. (98) Ventral view. (99) Retrolateral view. (100) Apex of palpal organ, apical view, cymbium discarded. (101) Id., cleared, retrolateral view. (102) Epigynum. (103) Vulva, ventral view. (104) Id., dorsal view. Bold lines indicate epigynal folds. Scale lines 0.2 mm.

Z. fulvopilosus*-subgroup**SPECIES INCLUDED: *Z. flagellans*, *Z. fulvopilosus*.Zelotes flagellans* (L. Koch, 1882)**

Figs 105-111

Prothesima flagellans L. Koch, 1882: 635, pl. 20, fig. 14 (description of ♂).*Zelotes fulvopilosus*. – Machado, 1949: 15, fig. 10 (misidentification).

MATERIAL EXAMINED: SPAIN, Andalusia, Granada, La Calahora (in pine forest), 37°10'N 03°03'W; 2 ♂, 2 ♀ (with palpus and vulva in microvial); 23.05.2002.

DESCRIPTION: Prosoma dark brown. Legs tawny to brown, with darker patella. Opisthosoma blackish, covered with black bristles and prostrate copper-coloured hairs. – ♂: Total length 4.00. Prosoma 1.84 (1.95) long, 1.43 (1.54) wide, 0.73 wide at level of posterior eyes. Eye sizes and interdistances: AME 0.05, ALE 0.08, PME 0.07, PLE 0.07; AME-AME 0.04, AME-ALE 0.01, PME-PME 0.06, PME-PLP 0.04, ALE-PLP 0.05. MOQ length 0.21, front width 0.28, back width 0.34. Clypeus: 0.08 from AME, 0.06 from ALE. Pedipalp (Figs 105-108): Retrolateral tibial apophysis 1.5 times dorsal length of tibia. Tegulum with a ventral sclerotization reaching level of median apophysis. Intercalary sclerite present. Terminal apophysis (Fig. 108) carrying a cone-shaped dorsal projection concealed by the cymbium, fused with embolar base to a single grooved sclerite (cf. Fig. 115 showing *Z. fulvopilosus*). Embolar base carrying a conical apical projection attached to embolar haematodocha. Median apophysis situated in apical position between apical projection and retrolateral tip of terminal apophysis. Very large, one-turn-coiled embolus reaching below proximal quarter of tegulum length. Leg spination: Tibiae III r221, IV r211; metatarsi III, IV v221. Tarsi and metatarsi I, II entirely scopulate. Scutum occupying almost 50% of opisthosoma length. – ♀: Total length 5.60. Prosoma 2.60 long, 2.00 wide, 1.00 wide at level of posterior eyes. Eye sizes and interdistances: AME 0.06, ALE 0.10, PME 0.10, PLE 0.08; AME-AME 0.06, AME-ALE 0.01, PME-PME 0.04, PME-PLP 0.06, ALE-PLP 0.07. MOQ length 0.23, front width 0.36, back width 0.47. Clypeus: 0.12 from AME, 0.10 from ALE. Epigynum (Fig. 109). Epigynal plate sclerotized between lateral and posterior folds. Deep lateral epigynal pouches situated in posterior sector of folds; anterior epigynal margin as wide as epigynal plate. Vulva (Figs 110-111): Posterior intromission. Copulatory duct with two revolutions. Median ducts reaching anterior part of epigynal plate. Leg spination: Femur IV p001, tibiae III, IV p211, r211; metatarsi III, IV v221, v221. Tarsi and metatarsi I, II entirely scopulate.

REMARK: I have not seen the type material, but Koch's original drawing leaves no doubt about the identity of the specimens examined.

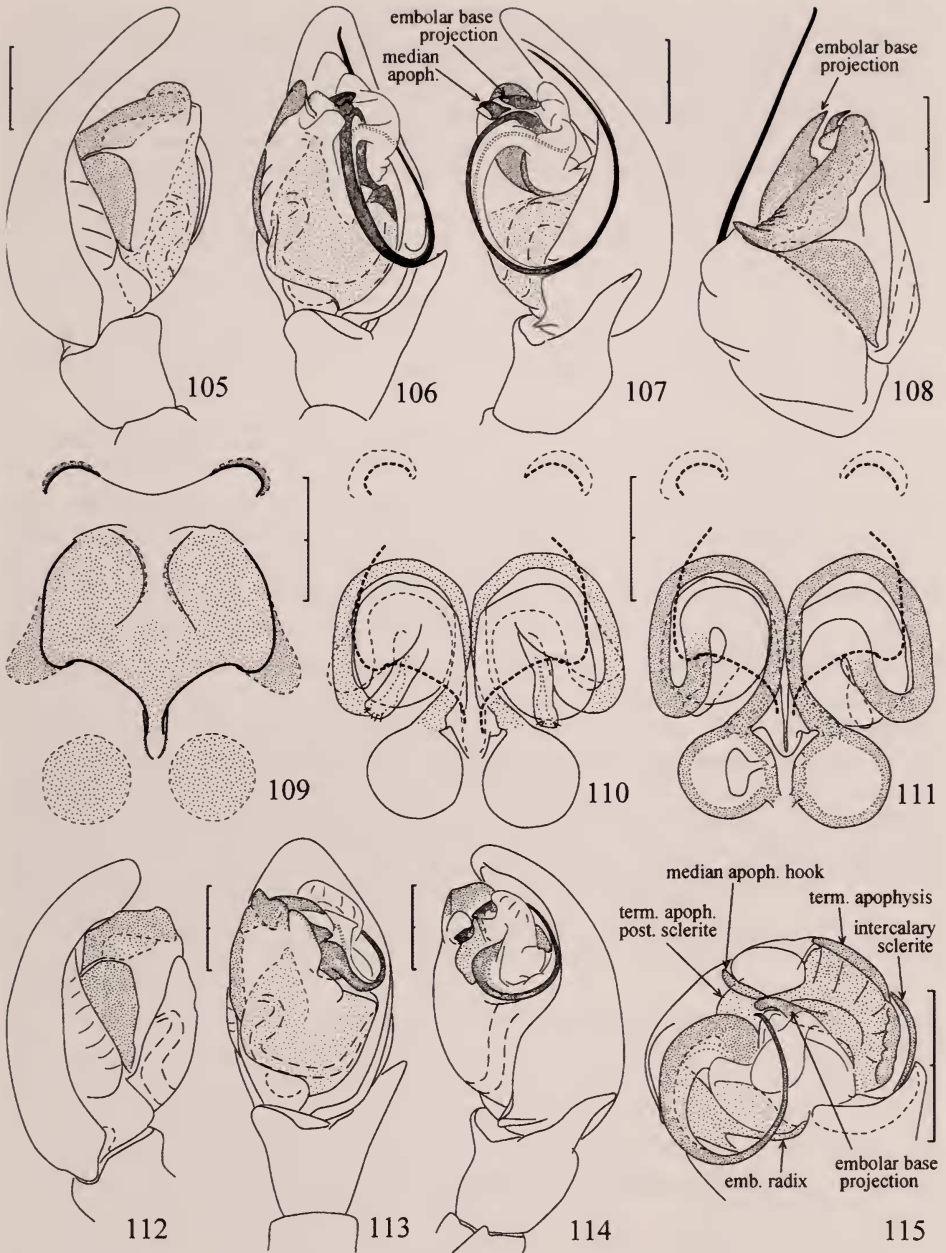
***Zelotes fulvopilosus* (Simon, 1878)**

Figs 112-118

Prothesima fulvopilosa Simon, 1878: 61, pl. 14, fig. 14 (description of ♂ and ♀).*Zelotes fulvopilosus*. – Simon, 1914: 178, 214, figs 317-318, 375 (description of ♂ and ♀). – Jézéquel, 1962: 598, fig. 3.

TYPE MATERIAL: Museum National Histoire Naturelle Paris, collection Simon; 1 ♂, jar 577, AR1947; 1 ♀, jar 577; AR1935 (together with 2 ♀ of *Z. flagellans*), no locality given.

OTHER MATERIAL EXAMINED: SPAIN, Catalonia, Gerona, Port de la Selva-Qadaquès (under stones, *Cistus*), 42°18'N 03°13'E; 1 ♀ (last moult 30.06.2004); 23.05.2004. – Gerona, Val



FIGS 105-115

(105-111) *Zelotes flagellans*. (105-108) Left male palp. (105) Prolateral view. (106) Ventral view. (107) Retrolateral view. (108) Apex of palpal organ, cymbium discarded, prolateral view. (109) Epigynum. (110) Vulva, ventral view. (111) Id., dorsal view. (112-115) *Zelotes fulvopilosus*, left male palp (specimen in coll. Simon). (112) Prolateral view. (113) Ventral view. (114) Retrolateral view. (115) Dorsal view, cymbium discarded. Bold lines indicate epigynal folds. Scale lines 0.2 mm.

de Blanya (4 km south of Capsacosta pass), 42°14'N 02°23'E; 1 ♂, 1 ♀; 25.05.2004. – Castilla/Leon, Avila, road to parking Gredos/Hoyo del Espino (1470m), 40°18'N 05°12'W; 1 ♀; 18.06.2009. – Nueva Castilla/La Mancha, Albacete, Hoya Gonzalo (under stones, evergreen oak), 38°55'N 01°34'W; 2 ♀; 16.05.2002. – Andalusia, Almeria, Puerto Maria, 37°42'N 02°10'W; 1 ♀ (last moult 24.05.2002); 19.05.2002. – Granada, La Vidriera / Pinar pass, 38°03'N 02°34'W; 2 ♂, 3 ♀ (last moult of 1 ♀ 31.05.2002); 20.05.2002. – Granada, Prado de Zangarrilla (Sierra Nevada, under stones, pasture, 2000m) 37°07'N 03°26'W; 1 ♂; 29.05.2002. – Jaen, Sierra de Cazorla (Fuente del Oso), 37°55'N 02°56'W; 4 ♂, 4 ♀ (with vulva and palpus in microvial, last moult of 1 ♀ 27.05.2002); 21.05.2002. – Jaen, Sierra de Cazorla (Linarejas), 37°55'N 02°55'W; 1 ♀; 22.05.2002. – Cordoba, Almodóvar del Rio (Breña dam), 37°50'N 05°04'W; 1 ♀; 01.06.2009. – Sevilla, Alanis, 38°02'N 05°11'W; 1 ♂; 01.07.1969. – Huelva, Linares de la Sierra /Aracena, 37°54'N 06°37'W; 1 ♀; 05.06.2002. – Huelva, Alajar /Aracena, 37°52'N 06°40'W; 1 ♀; 07.07.1969. – Same; 2 ♀; 07.06.2002. – Same (cork-oak leaf litter); 3 ♀; 09.06.2009. – Huelva, Fuenteheridos (deep leaf litter), 37°54'N 06°40'W; 1 ♀; 12.06.2009. – FRANCE, Languedoc, Eastern Pyrenees, above Banyuls sur Mer (350m), 42°28'N 03°08'E; 1 ♀ (last moult 07.06.2004); 23.05.2004.

DESCRIPTION: Prosoma dark brown. Legs brown, with lightened tarsi. Opisthosoma black, covered with black bristles. – ♂ from Spain, Fuente del Oso (in parentheses ♂ from same locality): Total length 5.33. Prosoma 2.35 (2.18) long, 1.86 (1.74) wide, 0.88 (0.84) wide at level of posterior eyes. Eye sizes and interdistances: AME 0.07, ALE 0.10, PME 0.09, PLE 0.09; AME-AME 0.05, AME-ALE 0.01, PME-PME 0.04, PME-PLE 0.04, ALE-PLE 0.05. MOQ length 0.21, front width 0.34 (0.21), back width 0.40 (0.31). Clypeus: 0.06 from AME, 0.05 from ALE. Pedipalp (Figs 112–115): Patella dorsally longer than tibia. Tibia wider than long. Retrolateral tibial apophysis short, dorsally arched. Tegulum with ventral sclerotization reaching level of median apophysis. Intercalary sclerite present. In ventral view embolar base projection visible behind terminal apophysis. Terminal apophysis (Fig. 115) fused with embolar base into a single grooved sclerite. One-turn-coiled embolus reaching mid-length of tegulum. Embolus arising from embolar radix not connected to embolar base. Tarsi I, II entirely scopulate, metatarsi I, II in apical half. Leg spination: Tibiae III, IV p211; metatarsi III, VI v221. Scutum occupying 35% of opisthosoma length. – ♀ from Spain, Fuente del Oso (in parentheses ♀ from same locality): Total length 5.50 (5.25). Prosoma 2.25 (1.94) long, 1.65 (1.48) wide, 0.94 (0.08) wide at level of posterior eyes. Eye sizes and interdistances: AME 0.07, ALE 0.10 (0.09), PME 0.09 (0.08), PLE 0.09 (0.08); AME-AME 0.04, AME-ALE 0.01, PME-PME 0.04, PME-PLE 0.05 (0.04), ALE-PLE 0.05. MOQ length 0.21 (0.18), front width 0.34 (0.30), back width 0.38 (0.37). Clypeus: 0.10 from AME, 0.05 from ALE. Epigynum (Fig. 116): Anterior anchoring pockets small, close to each other. Lateral epigynal pouches shallow, extended along the folds. Vulva (Figs 117–118): Median ducts situated in posterior half of epigynal plate. Tarsi and metatarsi I, II entirely scopulate. Leg spination: Tibiae III p211, r111, IV p211, r211; metatarsi III, VI v221.

Zelotes baeticus-group

DEFINITION: Light coloured spiders. Male palp: Retrolateral tibial apophysis with flattened and widened tip. A short intercalary sclerite present. Elevated and arched embolar base connected to embolus. Posterior sclerite of terminal apophysis connected directly to embolus (Fig. 133); embolus linked to embolar base by whitish cuticle along its prolateral margin (Figs 120, 127, 131, 133). Embolus with a large posterior basal

sector (Fig. 122), and a large terminal segment in the shape of a wide tube, the later open (Fig. 129) or flattened (Figs 128, 132); its variable ventral protrusion corresponding to prolateral projection of median apophysis. Epigynum: Lateral folds modified into large lateral pockets; median part membranous (Figs 123, 134). Cheliceral groove: Retromargin with large prolateral conical tooth and two smaller teeth behind; promarginal teeth (from ental to ectal): Medium, large, medium and five decreasing in size.

SPECIES INCLUDED: *Z. baeticus* sp. n., *Z. hispaliensis* sp. n. and *Z. cordubensis* sp. n.

KEY TO THE SPECIES OF THE *Z. BAETICUS*-GROUP

- 1 Prolateral apical protrusion of median apophysis of bulbus large and conspicuous, bent retrolaterally (Figs 131, 133); embolus wide open; lateral epigynal pockets covering lateral folds ***Z. baeticus* sp. n.**
- Prolateral apical protrusion of median apophysis reduced and cone-shaped (Figs 120, 127); embolus flattened **2**
- 2 Embolar base with terminal projection; embolus with ventral indentation; female unknown ***Z. cordubensis* sp. n.**
- Embolar base without terminal projection; embolus without ventral indentation; lateral epigynal pockets separated from lateral folds
 ***Z. hispaliensis* sp. n.**

Zelotes hispaliensis sp. n.

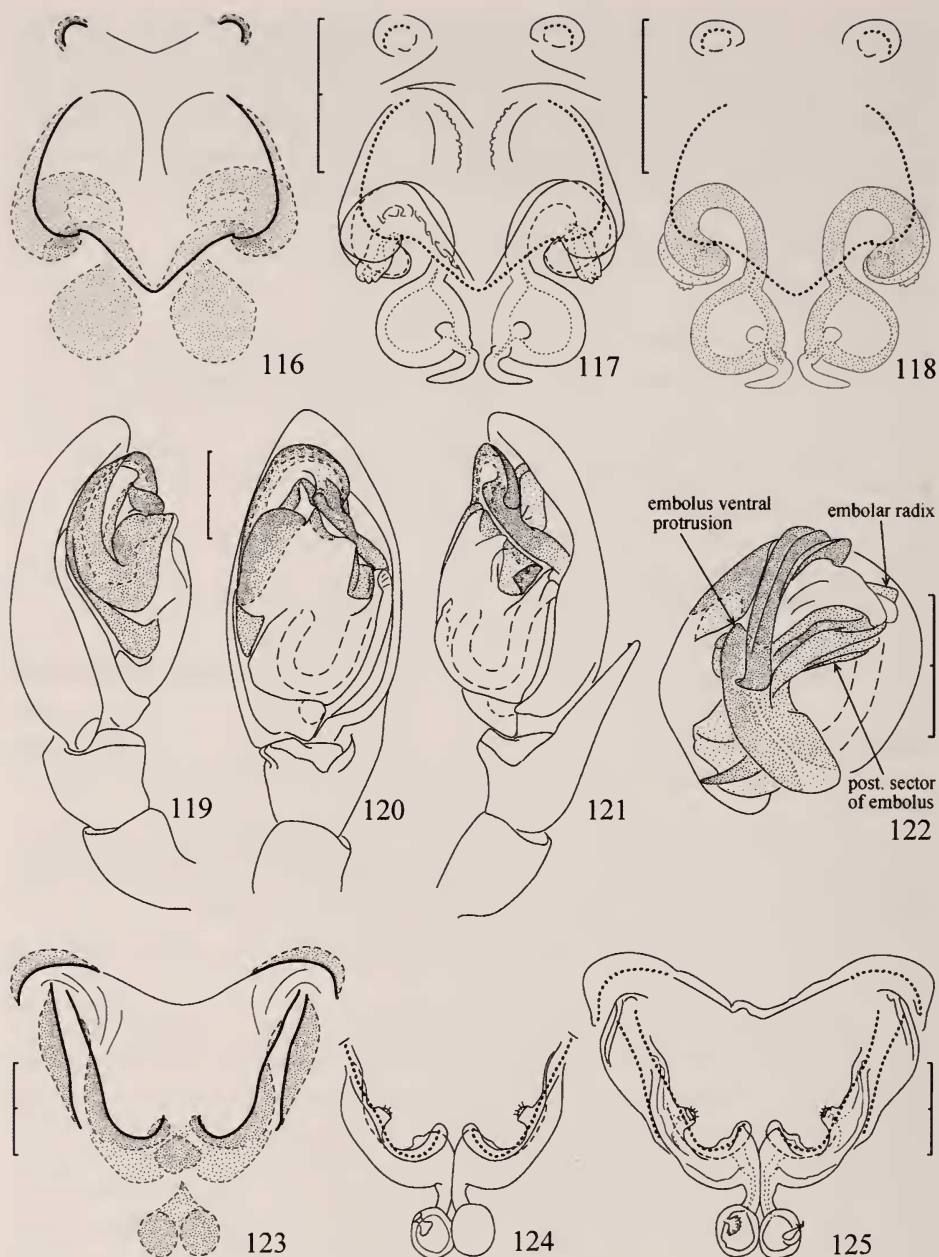
Figs 119-125

HOLOTYPE: SPAIN, Andalusia, Huelva, Alajar /Aracena, 37°52'N 06°41'W; ♂; 07.06.2002.

PARATYPES: Same locality as for holotype; 3 ♂, 5 ♀ (last moults of 1 ♂ 09.06.2002, of 2 ♀ 20.06 and 07.07.2002). – Same; 2 ♂ (with palpus in microvial); 07.07.1969. – Same (cork-oak leaf litter); 2 ♀ (last moults 12 and 13.06.2009); 09.06.2009. – Spain, Huelva, Puerto de Alajar (820m, evergreen oak leaf litter), 37°53'N 06°40'W; 2 ♂; 10.06.2009.

ETYMOLOGY: The species name is the adjective of Hispalis, the roman name of Sevilla.

DESCRIPTION: Prosoma tawny, adorned with very fine adpressed hairs and medium-sized black bristles. Opisthosoma covered with black adpressed hairs and black bristles. Posterior eye row slightly recurved. – ♂ paratypes (smaller ♂ in parentheses): Total length 4.75 (4.50). Prosoma 2.25 (1.90) long, 1.72 (1.47) wide, 0.91 (0.78) wide at level of posterior eyes. Eye sizes and interdistances: AME 0.06, ALE 0.10, PME 0.08 (0.07), PLE 0.08 (0.07); AME-AME 0.06 (0.05), AME-ALE 0.01, PME-PME 0.04, PME-PLE 0.06, ALE-PLE 0.06. MOQ length 0.23 (0.19), front width 0.37 (0.33), back width 0.44 (0.43). Clypeus: 0.08 from AME, 0.07 from ALE. Pedipalp (Figs 119-122): Patella dorsally longer than tibia. Tibia wider than long. Retrolateral tibial apophysis with widened and truncated tip, provided with a small tooth. Intercalary sclerite small. Terminal apophysis oblique, in prolateral position; its posterior sclerite directly connected to embolus, linked to embolar base by transparent cuticle. Hook of wide triangular median apophysis forming a gutter. Apical protrusion on median apophysis small, conical (Fig. 120). Embolar base projection absent.



FIGS 116-125

(116-118) *Zelotes fulvopilosus*. (116) Epigynum. (117) Vulva, ventral view. (118) Id., dorsal view. 119-125 *Zelotes hispaliensis* sp. n. (119-122) Left male palp. (119) Prolateral view. (120) Ventral view. (121) Retrolateral view. (122) Apex of palpal organ, cymbium discarded, retrolateral-apical view. (123) Epigynum. (124) Vulva, ventral view. (125) Id., dorsal view. Bold lines indicate epigynal folds. Scale lines 0.2 mm.

Embolus with a prolateral protrusion (Fig. 122). Leg spination: Metatarsi I, II v220; III, IV v221, some large specimens with an additional spine on femur II p011. Tarsi and metatarsi I, II entirely scopulate. Scutum occupying 1/4 of opisthosoma length. – ♀ (smaller specimen in parentheses): Total length 5.66. Prosoma 2.90 (1.96) long, 1.90 (1.43) wide, 1.11 (0.78) wide at level of posterior eyes. Eye sizes and interdistances: AME 0.07, ALE 0.11, PME 0.07, PLE 0.08; AME-AME 0.07, AME-ALE 0.01, PME-PME 0.05, PME-PLE 0.07, ALE-PLE 0.06. MOQ length 0.26, front width 0.46, back width 0.54. Clypeus: 0.11 from AME, 0.08 from ALE. Epigynum (Fig. 123): Lateral anchoring pockets not reaching posterior level of lateral folds; darker posterior median marking due to median vulval ducts. Vulva (Figs 124-125). Leg spination: Femur II p011, metatarsi III v221, r122; IV r122, some large specimens with an additional spine on tibia III r111.

REMARKS: *Z. hispaliensis* was found in evergreen oak leaf litter and seems to occur only in a narrow range of biotops.

***Zelotes cordubensis* sp. n.**

Figs 126-128

HOLOTYPE: SPAIN, Andalusia, Cordoba, Los Villares /Cordoba (Pinus litter), 37°59'N 04°48'W; ♂; 31.05.2009.

PARATYPE: Spain, Cordoba, Breña dam (evergreen oak litter), 37°51'N 05°04'W; 1 ♂; 01.06.2002.

ETYMOLOGY: The species name, an adjective, is derived from Corduba, the Roman name of Cordoba.

DESCRIPTION: Prosoma light coloured, adorned with very fine adpressed hairs and medium-sized black bristles. Opisthosoma covered with black adpressed hairs and black bristles. – ♂ holotype (paratype in parentheses): Total length 5.00 (5.50). Prosoma 2.25 (2.50) long, 1.72 (1.90) wide, 0.87 (1.00) wide at level of posterior eyes. Eye sizes and interdistances: AME 0.07 (0.07), ALE 0.08 (0.10), PME 0.07 (0.08), PLE 0.07 (0.08); AME-AME 0.05, AME-ALE 0.01, PME-PME 0.04 (0.06), PME-PLE 0.07, ALE-PLE 0.06 (0.07). MOQ length 0.21, front width 0.40, back width 0.50. Clypeus: 0.10 from AME, 0.07 from ALE. Posterior eye row slightly recurved. Pedipalp (Figs 126-128): Patella dorsally longer than tibia, the latter wider than long. Retrolateral tibial apophysis less long than 1.3 of cymbium and slightly longer than tibia, flexed backward, flattened and widened at tip. Terminal apophysis oblique, in a prolateral position, depressed, its margin tapering to the tip; its posterior sclerite directly connected to embolus, linked to embolar base by whitish cuticle. In ventral view apical protrusion of median apophysis partially concealed by terminal apophysis (Fig. 127). Embolar base with rounded apical projection protruding beyond junction with embolus (Figs 126-128). Embolus flattened and enlarged, with a ventral indentation. Tarsi I, II entirely scopulate; metatarsi in apical half. Leg spination: Femur II p011; metatarsi I, II v220; III, IV v221. Scutum occupying 1/4 of opisthosoma length or less.

REMARKS: *Z. cordubensis* sp. n. is closest to *Z. hispaliensis* sp. n. due to the reduced apical protrusion of the median apophysis, and to *Z. baeticus* sp. n. due to the presence of a ventral indentation on the embolus and due to a terminal projection on

the embolar base. The differences from the two sister species justify the description of a new species. The specimens examined were collected from evergreen oak and *Pinus* leaf litter.

***Zelotes baeticus* sp. n.**

Figs 129-136

HOLOTYPE: SPAIN, Extremadura, Badajoz, rio Sillo (Higuera la Real), 38°06'N 06°41'W; ♂ (last moult 12.06.2002); 09.06.2002.

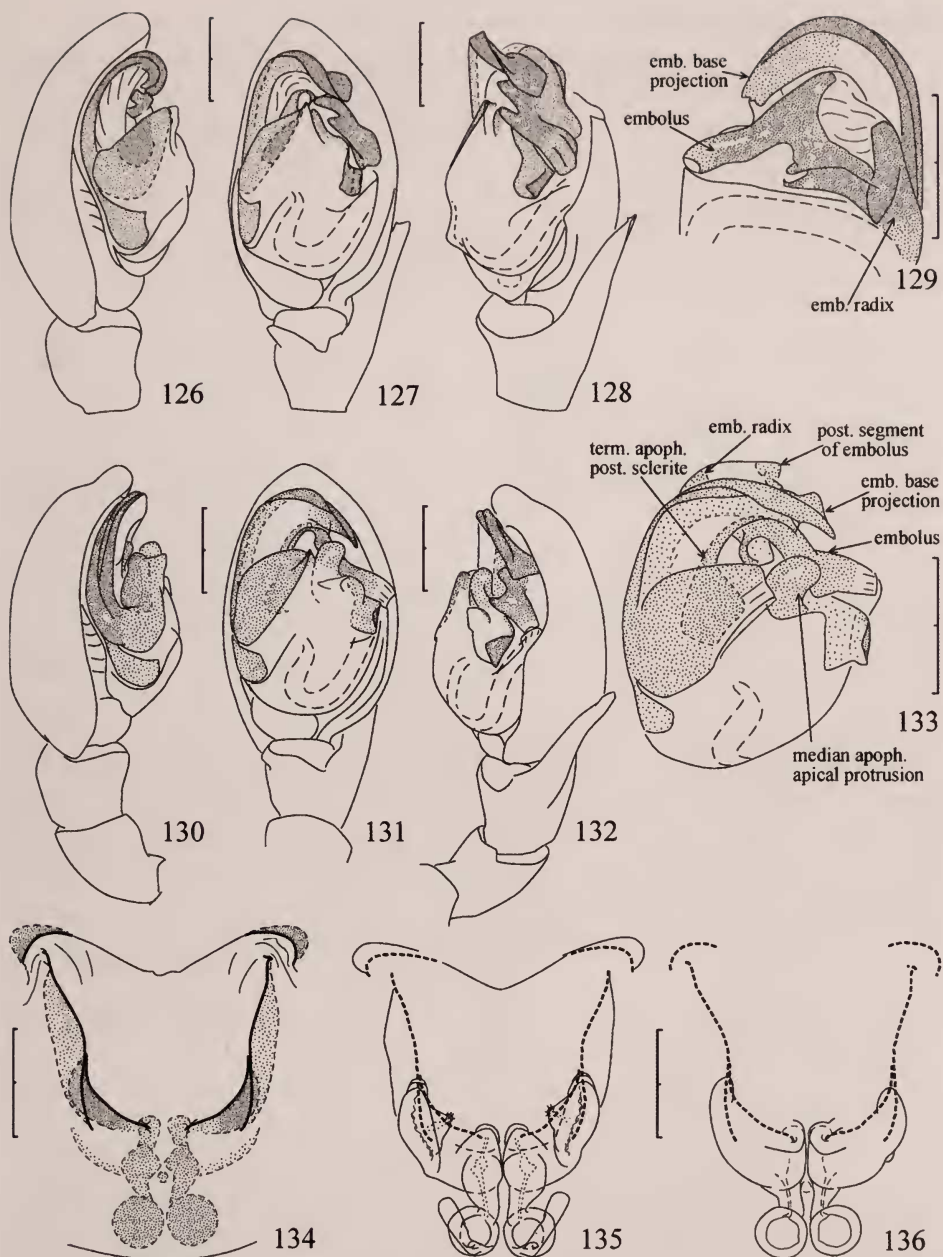
PARATYPES: Same locality as for holotype; 1 ♂, 1 ♀ (last moults of ♂ 27.06.2002, of ♀ 09.06.2002). – 2 ♂; same; 14.06.2009. – Spain, Andalusia, Cordoba, road Posada-Villaviciosa (under stones in *Pinus* litter), 37°00'N 05°05'W; 1 ♂ (last moult 19.06.2009); 02.06.2009. – Spain, Huelva, north of La Nava (schist litter), 38°00'N 06°45'W; 3 ♂, 2 ♀ (last moults of 2 ♂ 16.06.2002, of 1 ♀ 11.08.2002); 09.06.2002. – Spain, Huelva, Alajar /Aracena (under stones and in vegetation litter), 37°53'N 06°40'W; 1 ♂, 2 ♀ (last moults of ♀ 20.07 and 03.08.2009); 09.06.2009.

OTHER MATERIAL EXAMINED: SPAIN, Sevilla, Rivera de Benalija (Pintado dam), 38°02'N 05°55'W; 1 ♀ (last moult 24.06.2009); 05.06.2009. – Sevilla, Rio Viar /Castilblanco, 37°42'N 05°53'W; 1 ♂; 24.06.1969.

ETYMOLOGY: The species name is the adjective of Baetis, the Roman name of the river Guadalquivir.

DESCRIPTION: Prosoma tawny, adorned with very fine adpressed hairs and medium-sized black bristles. Opisthosoma covered with black adpressed hairs and black bristles. Posterior eye row straight or slightly recurved. – ♂ paratype from Rio Sillo; Total length 5.70. Prosoma 2.50 long, 1.90 wide, 0.93 wide at level of posterior eyes. Eye sizes and interdistances: AME 0.07, ALE 0.10, PME 0.07, PLE 0.07; AME-AME 0.05, AME-ALE 0.01, PME-PME 0.06, PME-PLE 0.07, ALE-PLE 0.06. MOQ length 0.24, front width 0.40, back width 0.49. Clypeus: 0.11 from AME, 0.86 from ALE. Pedipalp (Figs 129-133): Patella dorsally longer than tibia. Tibia wider than long. Retrolateral tibial apophysis with parallel margins, truncated, provided with a small tooth. Intercalary sclerite small. Terminal apophysis oblique, in a prolateral position, its apical part wide, depressed into a shallow groove (Fig. 130); its posterior sclerite directly connected to embolus, linked to embolar base by whitish cuticle. Wide hook of median apophysis triangular, forming a gutter. Median apophysis with a large blunt apical protrusion (Figs 131, 133) corresponding to a rounded ventral indentation in basal half of terminal sector of embolus (Fig. 132). Embolar base with an apical projection with a triangular dorsal flap. Tarsi I, II entirely scopulate, metatarsi I, II in apical half. Leg spination: Metatarsi I, II v220; III, IV v221; some large specimens with an additional spine on femur II p011. Scutum occupying 1/5 of opisthosoma length. – ♀ paratype from La Nava: Total length 6.20. Prosoma 2.00 long, 1.43 wide, 0.83 wide at level of posterior eyes. Eye sizes and interdistances: AME 0.07, ALE 0.10, PME 0.06, PLE 0.07; AME-AME 0.04, AME-ALE 0.01, PME-PME 0.05, PME-PLE 0.06, ALE-PLE 0.06. MOQ length 0.21, front width 0.35, back width 0.41. Clypeus: 0.07 from AME, 0.57 from ALE. Epigynum (Fig. 134): Lateral epigynal pockets partially covering lateral folds, extended over posterior level of folds (Fig. 134). Vulva (Figs 135-136). Tarsi and metatarsi I, II entirely scopulate. Leg spination: Tibia III r111; metatarsi III, IV v221; some large specimens with an additional spine on femur II p011.

REMARKS: *Z. baeticus* seems to occur in a wide range of biotops: Below stones in *Pinus*, grass and schist litter.



FIGS 126-136

(126-128) *Zelotes cordubensis* sp. n., left male palp. (126) Holotype, prolateral view. (127) Id., ventral view. (128) Paratype, cymbium discarded, retrolateral view. (129-136) *Zelotes baeticus* sp. n. (129-133) Left male palp. (129) Embolus complex, dorsal view. (130) Prolateral view. (131) Ventral view. (132) Retrolateral view. (133) Apical view, cymbium removed. (134) Epigynum. (135) Vulva, dorsal view. (136) Id., ventral view. Bold lines indicate epigynal folds. Scale lines 0.2 mm.

***Zelotes atrocaeruleus*-group**

DEFINITION: Terminal apophysis with ventral and dorsal lobe, partly or entirely fused with the embolar base.

SPECIES INCLUDED: *Z. atrocaeruleus* (Simon) and *Z. latreillei* (Simon).

***Zelotes atrocaeruleus* (Simon, 1878)**

Figs 137-145

Prothesima atrocaerulea Simon, 1878: 73, pl. 14, fig. 16 (description of ♂ and ♀).

Zelotes atrocoruleus. – Miller, 1967: 260, pl. 1, figs 15-18, pl. 5, fig. 7 (description of ♂ and ♀).

– Grimm, 1985: 238, figs 279, 292-293 (description of ♂ and ♀).

MATERIAL EXAMINED: SWITZERLAND, Vaud, near Genolier, 46°26'N 06°14'E; 1 ♀ (with vulva in microvial, last moult 09.06.2001); 30.05.2001. GREECE, Macedonia, Thessaloniki, east of Chortiatis (under stones in pasture), 40°37'N 23°07'E; 2 ♂ (with palpus in microvial), 1 ♀ (last moults ♂ 1 and 11.07.2005, ♀ 08.07.2005); 07.09.2004. – Thessaloniki, Aghios Vassilios, 40°40'N 23°07'E; 2 ♀; 14.06.1998. – Kastoria, north of Kastoria (pass), 40°35'N 21°18'E; 2 ♀; 20.06.1998. – Sterea Hellas, Phthiotidas, Aghios Konstantinos-Agnadi, 38°44'N 22°52'E; 1 ♂ (last moult 08.06.2005); 18.09.2004. – Phthiotidas, West of Malesina, 38°37'N 23°13'E; 1 ♂, 1 ♀; 21.05.1968. – Same; 1 ♂, 2 ♀ (last moults ♀ 01.06.1998); 21.05.1998. – Same; 1 ♂ (with palpus in microvial, last moult 08.08.2005); 25.09.2004. – Phthiotidas, Near Malesina, 38°37'N 23°13'E; 1 ♀; 08.06.2008. – Phthiotidas, east of Theologos (under stones, Cistus), 38°39'N 23°12'E; 1 ♀; 20.06.2008. – Eubea, Loutra Aidipsou, 38°53'N 22°59'E; 1 ♂; 29.05.1983. – Peloponnesus, Elis, Andritsaina, 37°30'N 21°53'E; 2 ♂, 1 ♀; 29.05.1981. – Laconia, north-west of Monemvasie (under stones), 36°43'N 22°59'E; 1 ♀ (last moult 07.06.2005); 03.10.2004. – Argolida, Palaia Epidauros (in *Pinus* litter), 37°39'N 23°09'E; 1 ♂ (with palpus in microvial, last moult 02.07.2005); 01.10.2004.

REMARKS: The Greek ♂♂ (Figs 137-143) correspond to illustrations by Grimm (1985: fig. 279) and Miller (1967: figs 15-18). The ventral lobe of the terminal apophysis is relatively narrow in Fig. 138, it is variable in width and sometimes serrated. The Swiss ♀ (Figs 142-143) corresponds to illustrations by Grimm (1985: figs 292-293) and Miller (1967: fig. 7). The Greek ♀♀ differ (Figs 144-145) by longer epigynum and glandular duct, and by a shorter median duct.

DESCRIPTION: See Grimm (1985: 238, figs 279, 292-293).

***Zelotes latreillei* (Simon, 1878)**

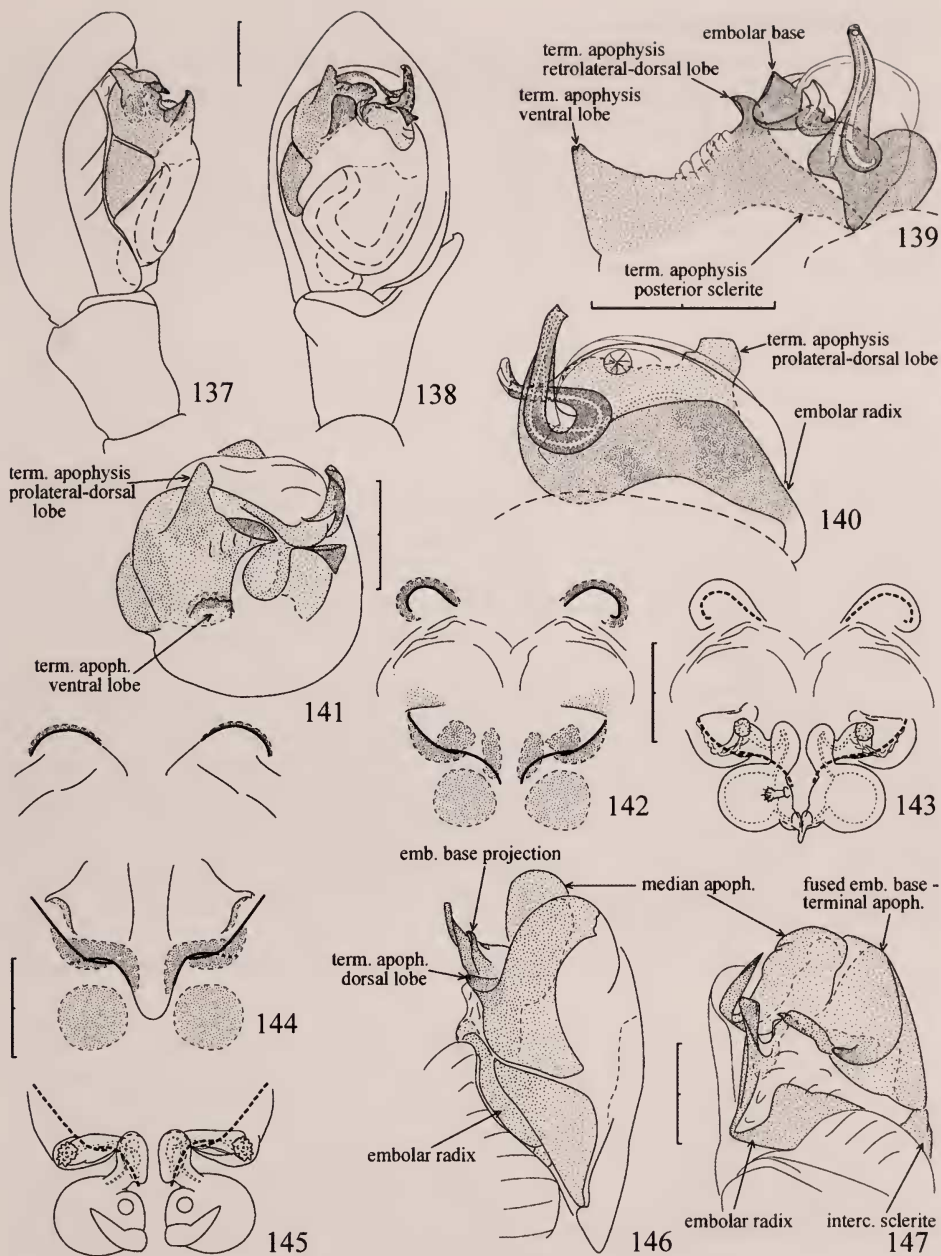
Figs 146-147

Prothesima latreillei Simon, 1878: 62 (description of ♂ and ♀).

Zelotes latreillei. – Simon, 1914: 165, 177, 214, figs 330-331, 371. – Miller, 1967: 270, pl. 3, figs 14-15, pl. 4, fig. 9 (description of ♂ and ♀). – Grimm, 1985: 201, figs 2, 7, 9, 220-221, 241, 258-259 (description of ♂ and ♀). – Senglet, 2004: 117, figs 102-103 (♀).

MATERIAL EXAMINED: GREECE, Macedonia, Thessaloniki, west of Aghios Vassilios, 40°40'N 23°05'E; 2 ♂; 08.09.2004. – Same; 1 ♂ (last moult 03.08.2008); 31.05.2008. – FRANCE, Languedoc, Aude, Carcanet forest (in pasture), 42°41'N 02°08'E; 1 ♂, 6 ♀ (with vulva in microvial, last moults ♂ 24.08.2001, 2♀ 30.08.2001); 04.07.2001. – Aude, Carcanet forest (in pasture edge), 42°40'N 02°09'E; 1 ♂, 1 ♀ (last moults ♂ 15.08.2001, ♀ 15.09.2001); 04.07.2001. – Eastern Pyrenees, above Les Fourquets (1800m), 42°26'N 02°25'E; 1 ♀; 30.06.2001. – Eastern Pyrenees, Les Fourquets, 42°26'N 02°23'E; 1 ♂ (last moult 0.08.2001); 30.06.2001 (1600m). – Eastern Pyrenees, Les Angles, /Matemale forest (1700m), 42°33'N 02°04'E; 2 ♀; 03.07.2001. – PORTUGAL, Tras-Os-Montes, Vila Real, Cortico /Montalegre (900m), 41°46'N 07°47'W; 1 ♀; 30.08.1969.

DESCRIPTION: See Grimm (1985: 201, figs 2, 7, 9, 220-221, 241, 258-259).



FIGS 137-147

(137-145) *Zelotes atrocaeruleus*. (137-141) Left male palp. (137) Prolateral view. (138) Ventral view. (139) Cleared, retrolateral view. (140) Id., dorsal view. (141) Id., cymbium discarded, apical view. (142-143) Female from Switzerland. (142) Epigynum. (143) Vulva, dorsal view. (144-145) Female from Greece. (144) Epigynum. (145) Vulva, dorsal view. (146-147) *Zelotes latreillei*, left male palp, cymbium discarded. (146) Prolateral view. (147) Dorsal view. Bold lines indicate epigynal folds. Scale lines 0.2 mm.

Zelotes subterraneus-group

DEFINITION: Embolar base a simple transverse sclerite with a retrolateral projection and a notched link to embolus; posterior sclerite of terminal apophysis connected to posterior tegular base.

SPECIES INCLUDED: *Z. aeneus* (Simon), *Z. apricorum* (L. Koch), *Z. clivicola* (L. Koch), *Z. cyanescens* Simon, *Z. egregius* Simon, *Z. gallicus* Simon, *Z. pseudo-apricorum* Schenkel, *Z. subterraneus* (C. L. Koch) and *Z. egregioides* n. sp. (the only species of this group treated here).

Zelotes egregioides sp. n.

Figs 148-156

Zelotes fuscipes. – Machado, 1941: 15, figs 10-14 (misidentification). – Jézéquel, 1962: 600, fig. 11 (misidentification). – Miller, 1967: 263, pl. 2, fig. 4, pl. 5, fig. 8 (misidentification).

HOLOTYPE: SPAIN, Castilla / Leon, Avila, Peñanegra pass (under stones), 40°25'N 05°18'W; ♂ (last moult 01.07.2009); 17.06.2009.

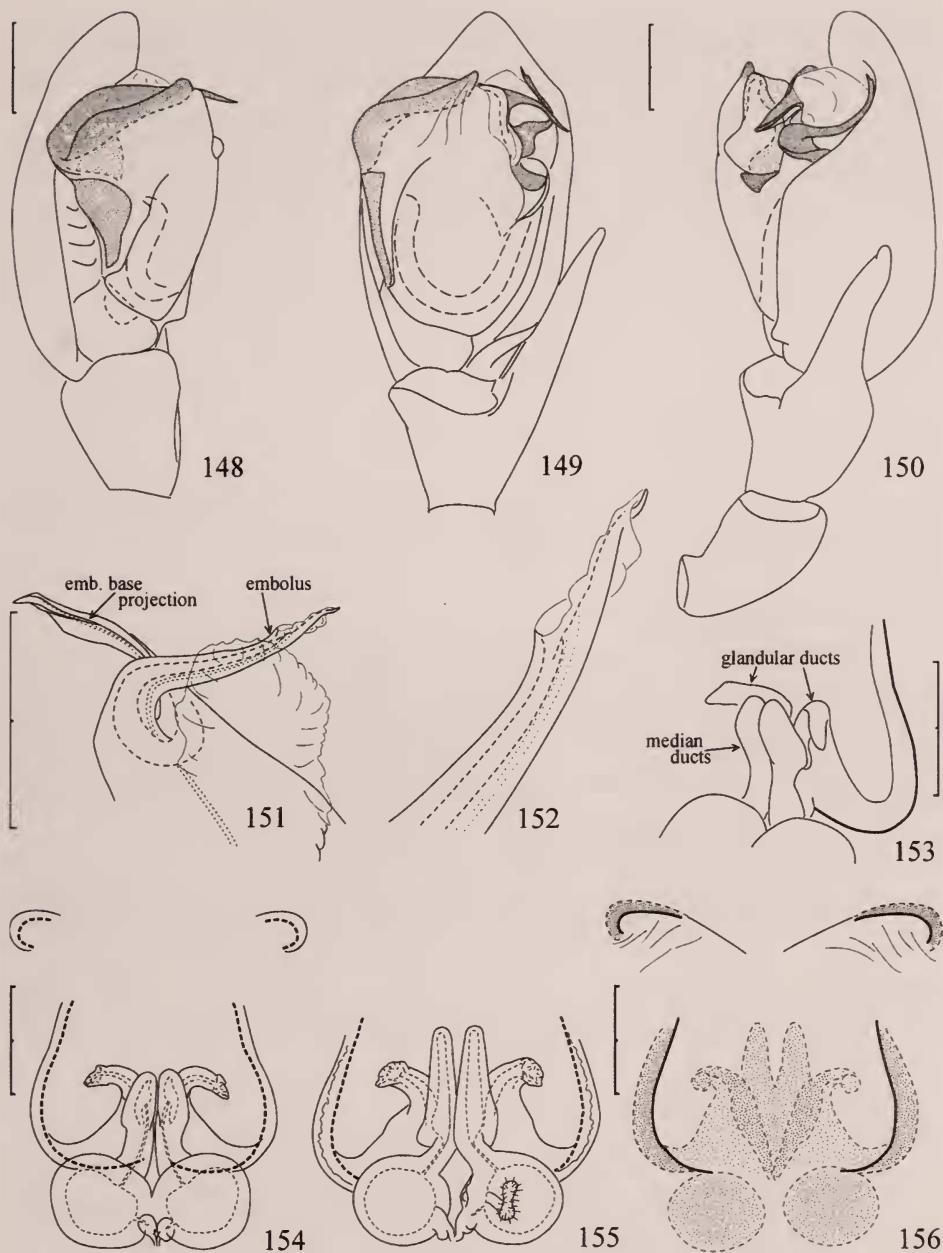
PARATYPES: Same locality as for holotype; 1 ♂, 1 ♀ (with palpus and vulva in microvial, prosoma ♂ partly destroyed, last moults ♂ 20.07.2009, ♀ 04.08.2009). – Same locality as for holotype; 3 ♂, 1 ♀ (last moults ♂ 20.07-11.08.2009, ♀ 06.08.2009). – Spain, Avila, Parking Gredos /Hoyo del Espino (1780m, in pasture), 40°16'N 05°14'W; 1 ♂ (last moult 08.07.2009); 18.06.2009. – Spain, Avila, Tornavaca pass (under stones), 40°16'N 05°40'W; 2 ♂, 1 ♀ (last moults ♂ 02.7 and 07.08.2009, ♀ 24.07.2009); 17.06.2009. – Spain, Badajoz, Rio Sillo (Higuera la Real), 38°06'N 06°41'W; 1 ♂, 1 ♀ (with palpus and vulva in microvial, last moults ♂ 27.09.2009, ♀ 20.10.2009); 14.06.2009.

OTHER MATERIAL EXAMINED: SPAIN, Aragon /Navarra, Saragosse, Ariza, 48°18'N 02°05'W; 3 ♀ (with vulva in microvial); 24.09.1967. – Salamanca, El Cabaco, 40°32'N 06°08'W; 1 ♂; 12.08.1971. – Estremadura, Caceres, west of Jarandilla (litter in vegetation), 40°08'N 05°40'W; 1 ♀ (last moult 01.10.2009); 16.06.2009. – Andalusia, Granada, La Vidriera /Pinar pass, 38°03'N 02°34'W; 1 ♂ (last moult 02.08.2002); 20.05.2002. – Granada, Puerto de la Ragua (2000m), 37°07'N 03°02'W; 1 ♂ (last moult 01.07.2002); 24.05.2002. – PORTUGAL, Tras-Os-Montes, Vila Real, Vilarandelo - S. Lourenço /Chaves, 41°40'N 07°21'W; 1 ♂ 1 ♂ juv.; 29.08.1969. – Vila Real, Cortico /Montalegre, 41°46'N 07°47'W; 1 ♂; 30.08.1969 (900m). – Beira Alta, Guarda, Maceira /Fornos de Algodres (Casal do Monte), 40°44'N 07°24'W, 1 ♂, 1 ♀ (with palpus and vulva in microvial); 09.08.1971.

ETYMOLOGY: The species name indicates a close relationship with *Z. egregius* Simon.

DIAGNOSIS: ♂: Close to *Z. aeneus* and *Z. egregius* (see Senglet, 2004: figs 55-57) with respect to terminal apophysis and embolar base; differs from these two species by the absence of an acute prolateral ventral tooth on the embolar base and by the absence of a median membranous flap on the embolus. – ♀: Differs from that of *Z. egregius* (see Senglet, 2004: figs 59-61) by the strongly retrolaterad-directed and longer glandular duct. Different from *Z. murcidus* (see Simon, 1914: fig. 374; Jézéquel, 1962: fig. 14, slide PM 53, col. Simon examined), by the wider epigynal plate and the glandular ducts reaching 40% of the total epigynal length (in *Z. murcidus* only 30%).

DESCRIPTION: Large dark species. Prosoma dark brown, with black bristles. Opisthosoma black, covered with greyish adpressed hairs and black bristles. Legs dark brown, with lighter tarsi. Posterior eye row straight to slightly recurved. – ♂ paratype from Peñanegra, (holotype in parenthesis): Total length 6.00 (5.53). Prosoma: 2.70 (2.38) long, 2.10 (1.95) wide, 1.08 (0.93) wide at level of posterior eyes. Eye sizes and



FIGS 148-156

Zelotes egregioides sp. n. (148-152) Left male palp. (148) Retrolateral view. (149) Ventral view. (150) Retrolateral view. (151) Embolus complex cleared, dorsal view. (152) Tip of embolus. (153) Vulva, short median duct type, dorsal-lateral view. (154) Id., dorsal view. (155) Vulva, long median duct type, dorsal view. (156) Epigynum. Bold lines indicate epigynal folds. Scale lines 0.2 mm.

interdistances: AME 0.06, ALE 0.11, PME 0.10, PLE 0.10; AME-AME 0.06, AME-ALE 0.01, PME-PME 0.05 (0.04), PME-PLE 0.06 (0.05), ALE-PLE 0.08 (0.07). MOQ length 0.27 (0.23), front width 0.38 (0.36), back width 0.44 (0.43). Clypeus: 0.14 from AME, 0.11 from ALE. Pedipalp (Figs 148-152): Patella dorsally longer than tibia. Tibia dorsally wider than long. Retrolateral tibial apophysis longer than tibia. Scutum occupying 1/4 of opisthosoma length. Leg spination: Metatarsi I v000; III, IV v221. Tarsi I, II entirely scopulate, metatarsi in apical 3/4. – ♀ paratypes from Peñanegra: Total length 5.53 (5.50). Prosoma: 2.55 (2.25) long, 1.90 (1.73) wide, 1.03 (0.90) wide at level of posterior eyes. Eye sizes and interdistances: AME 0.05, ALE 0.10, PME 0.08, PLE 0.08; AME-AME 0.07, AME-ALE 0.01, PME-PME 0.04, PME-PLE 0.05, ALE-PLE 0.70. MOQ length 0.25, front width 0.26, back width 0.31. Clypeus: 0.11 from AME, 0.08 from ALE. Epigynum and vulva (Figs 153-156). Anterior extension of median ducts variable (in Figs 153-154 short, in 155-156 long). Leg spination: Metatarsi III, IV v221. Tarsi and metatarsi I, II entirely scopulate.

REMARKS: Adult ♂♂ occur from July to September, ♀ from July to October. The ♂ examined by Machado (1941: fig. 10) could belong to *Zelotes egregius* because of the presence of an acute prolateral tooth on the embolar base.

Zelotes criniger-metellus-group

DEFINITION: This heterogeneous group differs notably from *Zelotes* s. str. by: Absence of intercalary sclerite; radix with a dorsal apophysis, radix connected to embolus by a membranous link; embolar base with a prolateral-dorsal apophysis. Due to the presence of a posterior sclerite on the terminal apophysis, the shape of the ocular group and the general appearance, I leave this group in the genus *Zelotes*.

KEY TO THE SPECIES OF THE *Z. CRINIGER-METELLUS-GROUP*

- 1 Embolus elongated and coiled (Fig. 160) *Z. criniger*
- Embolus short and massive (Figs 165, 175) *Z. metellus-subgroup*

Zelotes criniger Denis, 1937

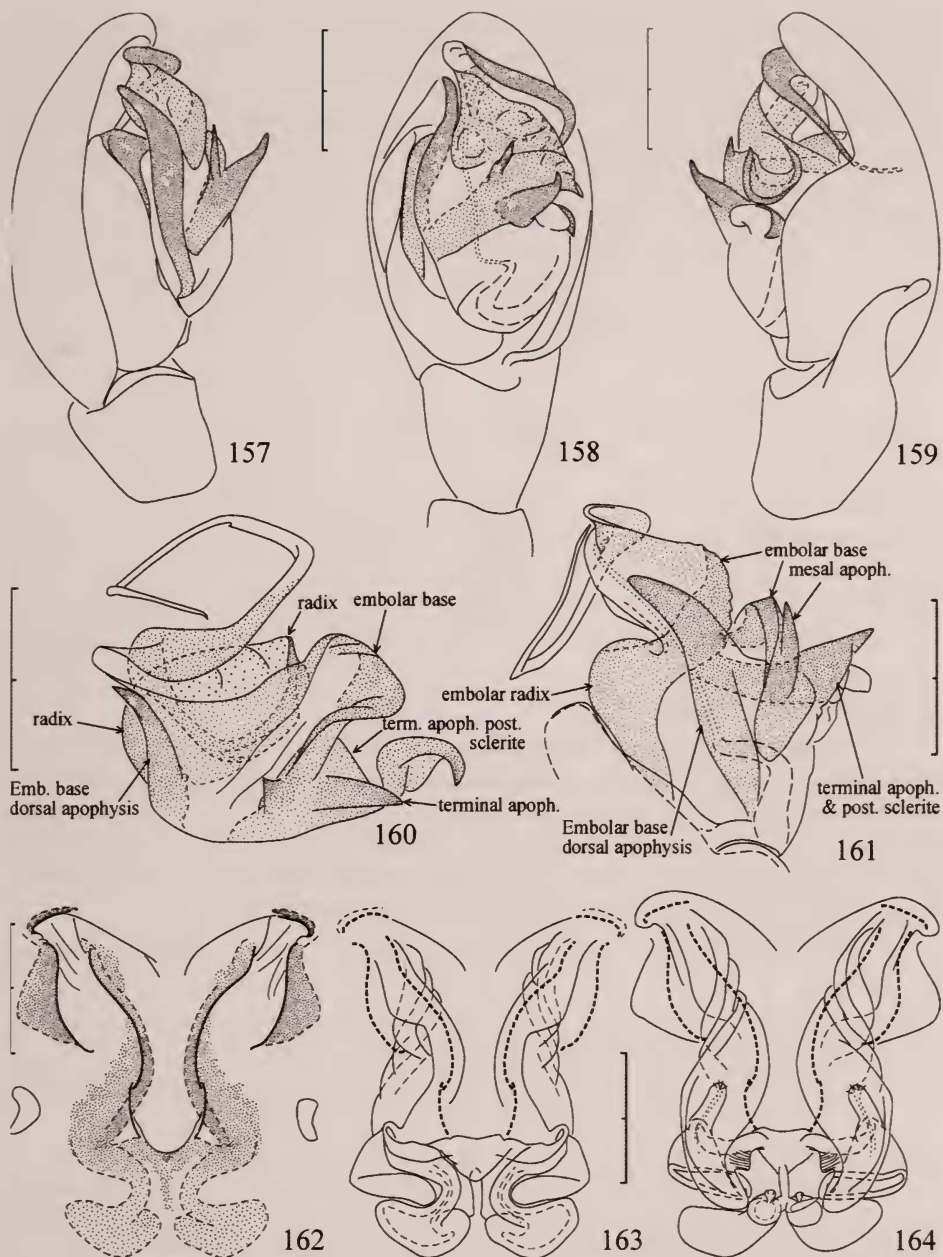
Figs 157-164

Zelotes criniger Denis, 1937: 1036, plate 2, fig. 4 (description of ♂). – Di Franco, 1987: 149, figs 8, 11 (♂).

Zelotes denisi Marinaro, 1967: 693, fig. 9 (description of ♀), **syn. n.** – Di Franco, 1987: 152, figs 12-13 (♀). – Deltshv *et al.* 2006: 712, figs 12-13 (♀).

MATERIAL EXAMINED: SPAIN, Andalusia, Cordoba, Breña dam, Almodóvar del Río (evergreen oak litter), 37°51'N 05°04'W; 4 ♂, 6 ♀ (with palpus, and vulva in microvial); 01.06.2002. – Cordoba, Almodóvar del Río (Breña dam), 37°50'N 05°04'W; 2 ♂, 5 ♀; 01.06.2009. – Sevilla, east of Cazalla de la Sierra (deep leaf litter), 37°57'N 05°45'W; 1 ♀; 04.06.2009.

DESCRIPTION: Prosoma brown, adorned with fine adpressed hairs. Opisthosoma black, covered with medium adpressed hairs. Legs brown, with darker femora. Posterior median eyes larger than posterior laterals in slightly recurved line. – ♂ from Breña dam: Total length 4.20. Prosoma: 1.76 long, 1.33 wide, 0.64 wide at level of posterior eyes. Eye sizes and interdistances: AME 0.71, ALE 0.08, PME 0.10, PLE 0.07; AME-AME 0.04, AME-ALE 0.01, PME-PME 0.02, PME-PLE 0.04, ALE-PLE



FIGS 157-164

Zelotes criniger. (157-161) Left male palp. (157) Prolateral view. (158) Ventral view. (159) Retrolateral view. (160) Cymbium and subtegulum discarded, apical view. (161) Id., cleared, prolateral view. (162) Epigynum. (163) Vulva, ventral view. (164) Id., dorsal view. Bold lines indicate epigynal folds. Scale lines 0.2 mm.

0.04. MOQ length 0.24, front width 0.31, back width 0.37. Clypeus: 0.10 from AME, 0.07 from ALE. Pedipalp (Figs 157-161). Patella dorsally longer than tibia. Tibia dorsally wider than long. Retrolateral tibial apophysis curved dorsally, tip rounded and provided with a small tooth. Ventrad-directed terminal apophysis cone-shaped, its strong posterior sclerite connected to mid part of radix. Large folded embolar base with a narrow connection to its dorsal apophysis (remains of an intercalary sclerite ?). Embolar base with an acute mesal apophysis and expanding into a large retrolateral lobe (Figs 160-161). Embolar radix fused to dorsal side of lobe of embolar base; fused sclerite, shaped into a large bowl with ventral convexity, reaching embolus through a membranous fold. Leg spination: Metatarsi I, II v220; III r122. Tarsi I, II entirely scopulate. Scutum occupying 40% of opisthosoma length. – ♀ from Breña dam: Total length 3.20. Prosoma: 1.80 long, 1.28 wide, 0.67 wide at level of posterior eyes. Eye sizes and interdistances: AME 0.07, ALE 0.08, PME 0.10, PLE 0.08; AME-AME 0.04, AME-ALE 0.01, PME-PME 0.02, PME-PLE 0.03, ALE-PLE 0.03. MOQ length 0.24, front width 0.36, back width 0.39. Clypeus: 0.08 from AME, 0.04 from ALE. Epigynum (Fig. 162) with large and sinuous lateral folds extended close to anterior anchoring pockets. Median epigynal surface membranous. Additional lateral pockets present. Vulva in dorsal view with large spiralled pouches almost reaching anterior anchoring pockets (Figs 163-164); sclerotized elements present in the posterior dorsal part. Leg spination: Metatarsi I v210; II v210; III r122.

Zelotes metellus-subgroup

DEFINITION: Male palp different from that of most *Zelotes* by a terminal apophysis and an embolar base on a common fused base, intercalary sclerite absent and a dorsal acute apophysis on embolar base and on embolar radix present. Embolar radix linked to embolus by membranous cuticle. Embolus short and wide. Retrolateral posterior lamina present on tegulum. Epigynum: Median part membranous; a characteristic horseshoe-like band bordering posterior part of epigynum.

SPECIES INCLUDED: *Z. prishutovae* Ponomarev & Tsvetkov and *Zelotes metellus* Roewer.

KEY TO THE SPECIES OF THE *Z. METELLUS*- SUBGROUP

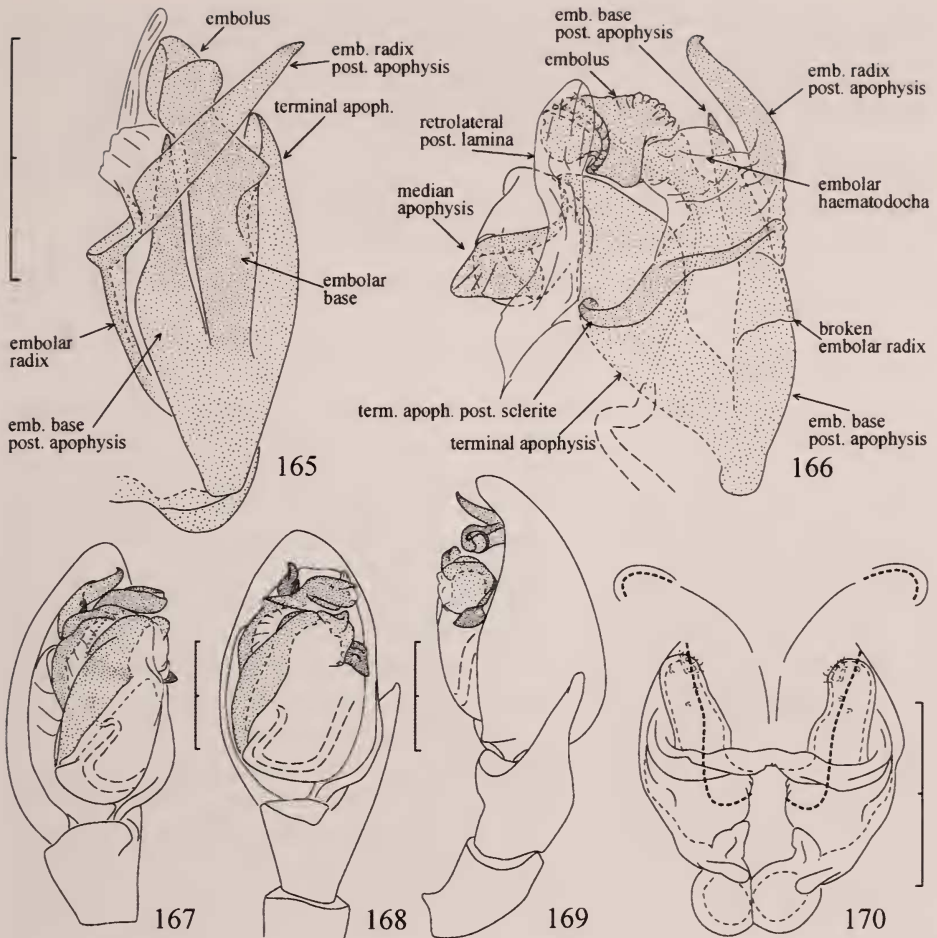
- 1 ♂: Posterior apophyses of embolar base and embolar radix sticking out of bulbus in its dorsal-prolateral part; tip of embolus blunt (Figs 167-169). ♀: Anterior sacs of vulva elongated, not fused to epigynum (Fig. 170) *Z. prishutovae*
- ♂: Posterior apophyses of embolar base and embolar radix shorter, not visible on resting pedipalp; tip of embolus tapering (Figs 172, 175). ♀: Anterior sacs of vulva short, fused to cuticle of epigynum (Fig. 177) *Z. metellus*

Zelotes prishutovae Ponomarev & Tsvetkov, 2006

Figs 165-170

Zelotes prishutovae Ponomarev & Tsvetkov, 2006: 13, figs 25-26 (description ♂ and ♀).

Camillina metellus. – Chatzaki, Thaler & Mylonas, 2003: 48, figs 3-7 (not figs 8-9 = *Z. metellus*).



FIGS 165-170

Zelotes prishutovae. (165-169) Left male palp. (165) Cymbium and subtegulum discarded, prolateral view. (166) Id., cleared dorsal view. (167) Prolateral view. (168) Ventral view. (169) Retrolateral view. (170) Vulva, dorsal view. Bold lines indicate epigynal folds. Scale lines 0.2 mm.

MATERIAL EXAMINED: GREECE, Peloponnesus, Laconia, south-west of Monemvasia, 36°40'N 23°01'E; 2 ♂; 11.05.1998. – Crete Lassithi 2 km west of Istro; 1 ♀; 02.06.1997 (leg. Chatzaki, MHNG).

DESCRIPTION: Prosoma dark brown. Opisthosoma black, covered with medium-long adpressed hairs. Legs brown, with lighter tarsi and metatarsi. Posterior eyes small, in a straight row. – ♂: Total length 3.33. Prosoma: 1.43 long, 1.17 wide, 0.57 wide at level of posterior eyes. Eye sizes and interdistances: AME 0.04, ALE 0.07, PME 0.06, PLE 0.06; AME-AME 0.28, AME-ALE 0.01, PME-PME 0.03, PME-PLE 0.03, ALE-PLE 0.04. MOQ length 0.14, front width 0.23, back width 0.29. Clypeus: 0.06 from AME, 0.04 from ALE. Pedipalp (Figs 165-169): Patella dorsally longer than tibia.

Tarsus width same as dorsal length. Tip of embolus wide. Apophysis of embolar radix elongated. Tarsi I, II entirely scopulate, metatarsi I, II in apical third. Leg spination: Metatarsi I v000; III, IV v221. Scutum occupying 1/5 of opisthosoma length. – ♀: Vulva (Fig. 170): Inflated and elongated glandular ducts with scattered pores.

Zelotes metellus Roewer, 1928

Figs 171-178

Zelotes metellus Roewer 1928: 110, pl. 1, figs 16-17 (description of ♀).

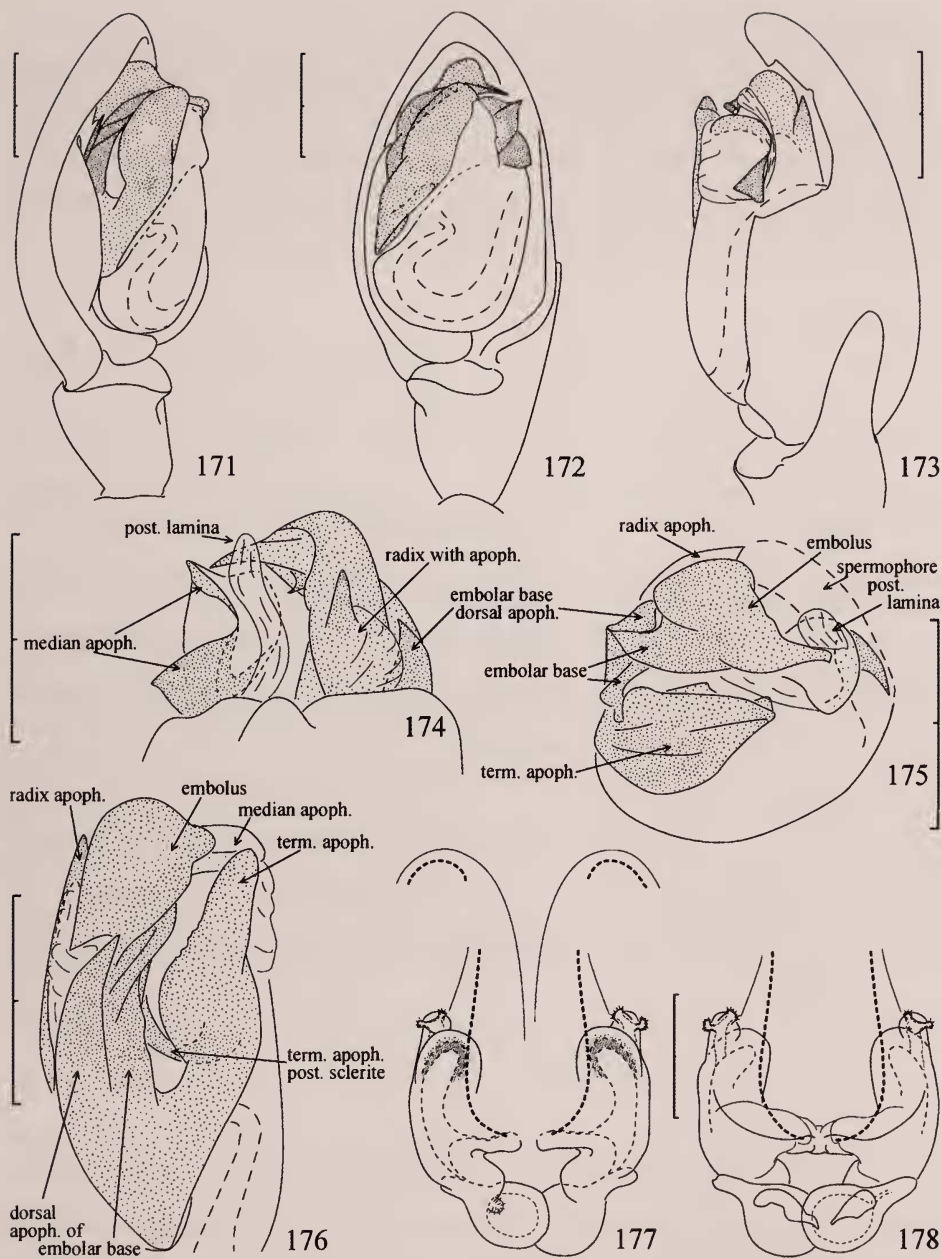
Camillina metellus. – Chatzaki, Thaler & Mylonas, 2003: 48, figs 8-9 (not ♂ in figs 3-7 = *Z. prishutovae*).

Zelotes sumchi Levy, 1998: 151, figs 128-130 (description of ♂) **syn. n.** – Levy, 2009: 41, figs 87-88 (description of ♀).

MATERIAL EXAMINED: IRAN, Fars, Firouzábád, 28°52'N 52°32'E; 1 ♂, 1 ♀, 1 immature ♂; 06.06.1974. – Kavár, 29°12'N 52°37'E; 1 ♂; 05.06.1974.

DESCRIPTION: Prosoma brown. Opisthosoma black, covered with medium-long adpressed hairs. Legs brown, with lighter tarsi and metatarsi. Posterior eyes small, in a straight row. – ♂ from Firouzábád (in parentheses from Kavar): Total length 4.75 (3.80). Prosoma: 1.85 (1.60) long, 1.45 (1.23) wide, 0.77 (0.59) wide at level of posterior eyes. Eye sizes and interdistances: AME 0.06 (0.05), ALE 0.10 (0.09), PME 0.08 (0.07), PLE 0.08 (0.07); AME-AME 0.05 (0.04), AME-ALE 0.01, PME-PME 0.04 (0.03), PME-PLE 0.03, ALE-PLE 0.04 (0.03). MOQ length 0.20, front width 0.34, back width 0.40. Clypeus: 0.17 from AME, 0.08 from ALE. Pedipalp (Figs 171-176): Patella dorsally longer than tibia. Tarsus width same as dorsal length. Embolus wide, with tapering tip. Tarsi I, II entirely scopulate, metatarsi I, II in apical two thirds. Leg spination: Tibia III r111; metatarsus I v000. Scutum occupying 1/5 of opisthosoma length. – ♀: Total length 5.70. Prosoma 2.20 long, 1.66 wide; 0.87 wide at level of posterior eyes. Eye sizes and interdistances: AME 0.06, ALE 0.11, PME 0.08, PLE 0.10; AME-AME 0.06, AME-ALE 0.01, PME-PME 0.04, PME-PLE 0.06, ALE-PLE 0.04. MOQ length 0.25, front width 0.38, back width 0.45. Clypeus: 0.11 from AME, 0.08 from ALE. Vulva (Figs 177-178): Lateral anterior vulval sacs fused to epigynal cuticle, visible on epigynum. Posterior eye row slightly recurved. Tarsi and metatarsi I, II scopulate.

REMARKS: Chatzaki *et al.* (2003: 48) transferred this species to *Camillina* on the basis of a bifid terminal apophysis on the male palp and did not take into account the very distinct ocular pattern of *Camillina*. The ocular pattern of *Z. metellus* is clearly of the *Zelotes* type, its terminal apophysis is not bifid.



FIGS 171-178

Zeletes metellus. (171-176) Left male palp. (171) Prolateral view. (172) Ventral view. (173) Retrolateral view. (174) Cymbium discarded, dorsal view. (175) Id., apical view. (176) Id., prolateral view. (177) Vulva, ventral view. (178) Id., dorsal view. Bold lines indicate epigynal folds. Scale lines 0.2 mm.

ACKNOWLEDGMENTS

Many thanks to Dr Christine Rollard of the National Museum of Natural History in Paris, and to Mrs Janet Beccaloni of the Natural History Museum in London for making type material available; to Jörg Wunderlich (Hirschberg) for commenting the manuscript; to Dr Peter. J. Schwendinger for his constant support and his precious help in editing this paper, and to Dr André Piuze (both of the Geneva Museum of Natural History) for producing the Scanning Electron Microscope pictures; to the Geneva Museum of Natural History for covering the charges of these pictures.

REFERENCES

- CHATZAKI, M. THALER, K. & MYLONAS, M. 2003. Ground spiders (Gnaphosidae; Araneae) from Crete and adjacent areas of Greece. Taxonomy and distribution. III. *Zelotes* and allied genera. *Revue suisse de Zoologie* 110(1) 45-89.
- CHYZER, C. & KULCZYNSKI, W. 1897. Araneae hungariae, 2. *Editio Academiae Scientiarum Hungaricae, Budapest*, pp. 151-366.
- DELTSHEV, C. 2003. A critical review of the spider species (Araneae) described by P. Drensky in the period 1915-1942 from the Balkans. *Berichte des Naturwissenschaftlich-Medizinischen Vereins in Innsbruck* 90: 135-150.
- DELTSHEV, C. 2004. Spiders (Araneae) from Sandanski-Petrich Valley (SW Bulgaria). *Mitteilungen aus dem Museum für Naturkunde in Berlin, Zool. Reihe* 80: 71-76.
- DELTSHEV, C. & BLAGOEV, G. 2001. A critical check list of Bulgarian spiders (Araneae). *Bulletin of the British Arachnological Society* 12: 110-138.
- DELTSHEV, C. BOSMANS, R. DE SPIEGELAERE, W. & PROVOOST, L. 2006. *Zelotes balcanicus* sp. n. a new and widespread species from the Balkan Peninsula (Araneae, Gnaphosidae). *Revue suisse de Zoologie* 113: 711-716.
- DENIS, J. 1937. On a collection of spiders from Algeria. *Proceedings of the Zoological Society of London* 1936: 1027-1060.
- DENIS, J. 1952. Notes d'aranéologie marocaine. I. Les *Zelotes* du Maroc. *Revue française d'Entomologie* 19: 113-126.
- DI FRANCO, F. 1987. Gnaphosidae (Arachnida, Araneae) dell'Isola di Salina (Isole Eolie). *Animalia* 13: 137-157.
- DI FRANCO, F. 1994. Nuovi dati sulle specie di *Zelotes* del Maghreb (Araneae, Gnaphosidae): Considerazioni morfologiche e descrizione di *Zelotes lagrecai* n. sp. *Animalia* 19: 213-225.
- DRENSKY, P. 1929. Paiazi (Aranea) ot tzentralna i iougo-zapadna Makedonia. *Spisanie na Bălgarska akademija na naukite, Sofia*, 39: 1-76.
- GRIMM, U. 1885. Die Gnaphosidae Mitteleuropas (Arachnida, Araneae). *Abhandlungen des Naturwissenschaftlichen Vereins Hamburg* 26: 1-318.
- JÉZÉQUEL, J. F. 1962. Contribution à l'étude des *Zelotes* femelles (Araneidea [sic], Labidognatha, Gnaphosidae) de la fauna française (2e note). *Bulletin du Muséum national d'Histoire naturelle, Paris* 33: 594-610.
- KOCH, L. 1866. Die Arachniden-Familie der Drassiden, Hefte 1-6. *J. L. Lotzbeck, Nürnberg*, pp. 1-304, pls 1-12.
- KOCH, L. 1882. Zoologische Ergebnisse von Exkursionen auf den Balearen. II: Arachniden und Myriapoden. *Verhandlungen der Zoologisch-Botanischen Gesellschaft in Wien* 31: 625-678.
- LEVY, G. 1998. The ground-spider genera *Setaphis*, *Trachyzelotes*, *Zelotes*, and *Drassyllus* (Araneae: Gnaphosidae) in Israel. *Israel Journal of Zoology* 44: 93-158.
- LEVY, G. 2009. New ground-spider genera and species with annexed checklist of the Gnaphosidae (Araneae) of Israel. *Zootaxa* 2066: 1-49.

- MACHADO, A. de B. 1941. Araignées nouvelles pour la faune portugaise (II). *Memorias e Estudos do Museu Zoológico da Universidade de Coimbra* 117: i-xvi, 1-60.
- MACHADO, A. de B. 1949. Araignées nouvelles pour la faune portugaise (III). *Memorias e Estudos do Museu Zoológico da Universidade de Coimbra* 191: 1-69.
- MARINARO, J. -Y. 1967. Les araignées d'Afrique du Nord. I. Sur une collection de Drassidae à peigne metatarsal d'Algérie. *Bulletin de la Société Zoologique de France* 92: 687-704.
- MILLER, F. 1967. Studien über die Kopulationsorgane der Spinnengattung *Zelotes*, *Micaria*, *Robertus* und *Dipoena* nebst Beschreibung einiger neuen oder unvollkommen bekannten Spinnenarten. *Prirodovedné Práce ustavu Ceaskoslovenske Akademie Ved v Brno* (N. S.) 1: 251-298.
- PLATNICK, N. I. & SHADAB, M. U. 1983. A revision of the American spiders of the genus *Zelotes* (Araneae, Gnaphosidae). *Bulletin of the American Museum of Natural History* 174: 97-192.
- PLATNICK, N. I. 2011. The World Spider Catalog, Version 11.5. *American Museum of Natural History*, online at: <http://research.amnh.org/entomology/spiders/catalog.html>.
- PONOMAREV, A. V. & TSVETKOV, A. S. 2006. New and rare spiders of family Gnaphosidae (Aranei) from a southeast of Europe. *Caucasian entomological Bulletin* 2: 5-13.
- ROEWER, C. F. 1928. Zoologische Streifzüge in Attika, Morea, und besonders auf der Insel Kreta. XI. Araneae. *Abhandlungen herausgegeben vom Naturwissenschaftlichen Verein zu Bremen* 27: 92-123, pls 1-2.
- SENGLET, A. 2004. Copulatory mechanisms in *Zelotes*, *Drassyllus* and *Trachyzelotes* (Araneae, Gnaphosidae), with additional faunistic and taxonomic data on species from southwest Europe. *Mitteilungen der Schweizerischen Entomologischen Gesellschaft* 77: 87-119.
- SIMON, E. 1878. Les arachnides de France, 4. *Roret, Paris*, 334 pp.
- SIMON, E. 1914. Les arachnides de France, 6, 1re partie: Synopsis générale et catalogue des espèces françaises de l'ordre des Araneae. *Roret, Paris*, 308 pp.